



DEPARTMENT OF ENVIRONMENTAL QUALITY

KATHLEEN BABINEAUX BLANCO

GOVERNOR

MAR 09 2007

MIKE D. McDANIEL, Ph.D.

SECRETARY

CERTIFIED MAIL 7003 2260 0005 9326 8658

Mr. Paul Miller
Cleco Power, LLC.
P.O. Box 5000
Pineville, LA 71360

RE: Notice of Technical Completeness
Cleco Power, LLC. - Rodemacher Power Station
Unit 1 Metal Cleaning Waste Pond
AI# 2922/ P-0027/ GD-079-0390/ PER 20000004
Rapides Parish

Dear Mr. Miller,

The Waste Permits Division is in receipt of your finalized copies of your submittal dated September 26, 2006. After reviewing this submittal, we have determined that your permit renewal is technically complete and ready for public review.

The Environmental Assistance Division will distribute copies of your application for public review and place public notices in the appropriate newspapers in accordance with LAC 33:VII.513.F.3. Please contact Soumaya Ghosn at (225) 219-3276 for the date of publication and the dates of public comment period. At the conclusion of the comment period, the Waste Permits Division will consider all comments and a decision will be made regarding your application.

Please reference your Agency Interest Number (AI# 2922), Permit Number (P-0027), Site Identification Number GD-079-0390, and Permit Activity Number (PER 20000004) on all future correspondence pertaining to this facility. If you have any questions concerning this matter, please contact Ms. Kenya Gillingham of the Waste Permits Section at (225) 219-3139.

Sincerely,

Bijan Sharafkhani, P.E.
Administrator
Waste Permits Division

kg

c: Lucy Hubenak, OES

ENVIRONMENTAL SERVICES

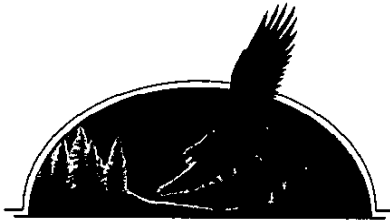
: PO BOX 4313, BATON ROUGE, LA 70821-4313

P:225-219-3181 F:225-219-3309

WWW.DEQ.LOUISIANA.GOV

RECEIVED

SEP 26 2006

LDEQ
E·A·G·L·E
 ENVIRONMENTAL SERVICES, INC.

18369 Petroleum Drive • Baton Rouge, Louisiana • 70809

Ph. (225) 757-0870 • Fax (225) 757-8855

www.eaglered.com

MAIN FILEoriginal to IOSW
sm
 copy to SW/G1/Townsel

AVG

September 25, 2006

Louisiana Department of Environmental Quality
 Office of Environmental Services
 Post Office Box 4313
 Baton Rouge, Louisiana 70821-4313
 Ms. Kenya Gillingham
 Water and Waste Permits Division

Re: Final Copies for
 Solid Waste Permit Renewal Application
 Generator ID No. GD-079-0390
 Permit Nos. P-0005, P-0027, P-0062
 ✓ **Agency Interest Number 2922**
 Cleco Power LLC – Rodemacher Power Station,
 Boyce, Louisiana

Dear Ms. Gillingham:

On behalf of our client, Cleco Power, LLC, Eagle Environmental Services, Inc. (Eagle), has prepared the attached six Final Copies of the Solid Waste Permit Renewal Applications for three solid waste permits for the Rodemacher Power Station. The Louisiana Department of Environmental Quality (LDEQ) requested the submittal of the Final Copies of the solid waste permit applications of three permitted facilities in correspondence dated June 16, 2006, and was received on June 23, 2006. The solid waste permitted facilities located at the facility that received this request are listed below:

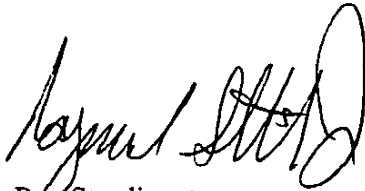
- Unit 2 Metal Cleaning Waste Pond, Bottom Ash Pond, Fly Ash Pond (P-0005);
- Unit 1 Metal Cleaning Waste Pond (P-0027); and
- Coal Sedimentation Pond (P-0062).

Cleco also has a solid waste permit (P-0379) for the Ash Management Area at the Rodemacher Power Station.

Ms. Kenya Gillingham
September 25, 2006
Page 2

If you should have any questions or comments, please contact Mr. Charlie VanHoof of Cleco at 318/484-7632 or our office at 225/757-0870.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ray Sturdivant', with a large, stylized flourish at the end.

Ray Sturdivant

cc: Charlie VanHoof, Cleco Power, LLC
Ricky Nguyen, Cleco Power, LLC
Bijan Sharafkhani, LDEQ Water and Waste Permits Division
David McQueen, LDEQ Northeast Regional Office
Jonathan McFarland, LDEQ, Environmental Technology Division

**CLECO POWER, LLC
RODEMACHER POWER STATION
BOYCE, LOUISIANA**

**AGENCY INTEREST No. 2922
GD-079-0390**

**UNIT 1 METAL CLEANING WASTE POND
SOLID WASTE STANDARD PERMIT
RENEWAL APPLICATION
PERMIT NO. P-0027**

September 2006

**CLECO POWER, LLC
RODEMACHER POWER STATION
BOYCE, LOUISIANA**

**AGENCY INTEREST NO. 2922
GD-079-0390**

**UNIT 1 METAL CLEANING WASTE POND
SOLID WASTE STANDARD PERMIT
RENEWAL APPLICATION
PERMIT NO. P-0027**

September 2006

Prepared By:

**Eagle Environmental Services, Inc.
18369 Petroleum Drive
Baton Rouge, Louisiana 70809
(225) 757-0870**

Eagle Project No. 01-0020

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- H HISTORICAL GEOLOGIC DATA
- I SOIL BORING LOGS AND MONITORING WELL CONSTRUCTION DIAGRAMS
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1.0 INTRODUCTION

Cleco Power, LLC (Cleco) owns and operates an electric utility power station known as the Rodemacher Power Station (RPS) located near Boyce, Rapides Parish, Louisiana; the site identification number for RPS is *GD-079-0390*.

As mandated by Title 33, Part VII, Chapter 5 of the Louisiana Administrative Code (LAC 33:III.Chapter 5), Cleco has prepared a standard solid waste permit application for submittal to the LDEQ to continue operation of the solid waste facility. This application addresses all requirements of the LDEQ's Solid Waste Permitting program under Subchapter C of LAC 33:VII.Chapter 5. This application has been prepared in a citation-response format. Each regulatory citation is presented in bold face and the response to the citation in normal typeface. Regulatory citations not applicable to this permit application are indicated as such and a rationale is presented as to why the section is not applicable. Supporting documentation is included as tables, figures, exhibits, and appendices. Referenced items are identified and included sequentially in the order in which they are referenced. The application specifically addresses in Section 2.0 through Section 4.0 the standards of the LDEQ's Solid Waste Regulations listed below.

- Section 2.0: §519.Part I: Permit Application Form
- Section 3.0: §521.Part II: Supplementary Information, All Processing and Disposal Facilities
- Section 4.0: §523.Part III: Additional Supplementary Information

As required under LAC 33:VII.519, the Solid Waste Standard Permit Application – Part I form, as contained in *Appendix B* of LAC 33:VII.3003, has been prepared and included in the application document prior to the regulatory responses. The Addendum to Permit Applications per LAC 33:I.1701 (Form 1701), as required under LAC 33:VII.520, is provided in this application prior to the regulatory responses. Financial assurance information has been provided within the appropriate responses to LAC 33:VII.521 (Section 3.0) and addresses the required information of LAC 33:VII.727.

1.1 FACILITY DESCRIPTION

Permit P-0027 includes the Unit 1 Metal Cleaning Waste Pond. The Unit 1 Metal Cleaning Waste Pond receives metal cleaning wastes from the Unit 1 and 3 boilers and related equipment, miscellaneous water plant metal cleaning waste, and occasional boiler blowdown.

1.2 WASTE CHARACTERIZATION

The types of materials handled by the facility will be non-hazardous, on-site-generated materials only. The materials consist of boiler cleaning waste, air heater wash, and turbine cleaning waste and including miscellaneous water plant metal cleaning waste. None of the materials disposed are characteristic or listed hazardous wastes as defined by LAC 33:V.Subpart 1 or by federal regulations (this is confirmed by process knowledge of each waste).

1.3 EXISTING ON-SITE SOLID WASTE FACILITIES

There are four permitted solid waste disposal facilities currently operating at the RPS, as identified below.

<u>Permit Number</u>	<u>Facilities</u>
P-0005	Unit 2 Metal Cleaning Waste Pond Bottom Ash Pond Fly Ash Pond
P-0027	Unit 1 Metal Cleaning Waste Pond
P-0062	Coal Sedimentation Runoff Pond
P-0379	Ash Management Area

The Ash Management Area, Permit P-0379 is adjacent to the Fly Ash Pond and Bottom Ash Pond and is under construction within the same area identified in the Army Corps of Engineers permit of 1977. Information relating to that facility may be referenced within this application (i.e., soil borings, soil classifications, subsurface hydrology, etc.) as the information is pertinent to this application due to their adjacent location. In addition, Cleco has implemented a unitized groundwater monitoring program that addresses all of the existing solid waste facilities.

2.0 LAC 33:VII.519. PART I: PERMIT APPLICATION FORM

The applicant shall complete a standard permit application Part I Form (LAC 33:VII.3003). The following subsections refer to the items on the form requiring that information:

- A. name of applicant (prospective permit holder) applying for a standard permit;**
- B. facility name;**
- C. description of the location of the facility (identify by street and number or by intersection of roads, or by mileage and direction from an intersection);**
- D. geographic location (section, township, range, and parish where the facility is located, and the coordinates [as defined by the longitude and latitude to the second] of the centerpoint of the facility);**
- E. mailing address of the applicant;**
- F. contact person for the applicant (position or title of the contact person is acceptable);**
- G. telephone number of the contact person;**
- H. type and purpose of operation (check each applicable box);**
- I. status of the facility (if leased, state the number of years of the lease and provide a copy of the lease agreement);**
- J. operational status of the facility;**
- K. total site acreage and the amount of acreage that will be used for processing and/or disposal;**
- L. list of all environmental permits that relate directly to the facility represented in this application;**
- M. a letter attached from the Louisiana Resource Recovery and Development Authority (LRRDA) stating that the operation conforms with the applicable statewide plan;**
(Note: In accordance with R.S. 30:2307.B, this regulation does not apply to solid waste disposal activity occurring entirely within the boundaries of a plant, industry, or business which generates such solid waste);
- N. zoning of the facility (if the facility is zoned, note the zone classification and zoning authority, and include a zoning affidavit or other documentation stating that the proposed use does not violate existing land-use requirements);**

***Cleco Power LLC
Rodemacher Power Station***

***Permit P-0027
Solid Waste Standard Permit Application***

- O. types, maximum quantities (wet tons/week), and sources (percentage of the on-site or off-site-generated waste to be received) of waste to be processed or disposed of by the facility;**
- P. indicate the specific geographic area(s) to be serviced by the solid waste facility;**
- Q. attach proof of publication of the notice regarding the submittal of the permit application as required in LAC 33:VII.513.A;**
- R. provide the signature, typed name, and title of the individual authorized to sign the application. Proof of the legal authority of the signatory to sign for the applicant must be provided; and**
- S. any additional information required by the administrative authority.**

The information required under LAC 33:VII.519 is provided in the Solid Waste Standard Permit Application – Part I form, as contained in *Appendix A* of LAC 33:VII.3003. A copy of the form is attached. As required under LAC 33:VII.3003.Appendix A, the form was completed in accordance with the instructions in LAC 33:VII.513.A.1.

SOLID WASTE STANDARD PERMIT APPLICATION - PART I

(The form shall be completed in accordance with the
instructions found in LAC 33:VII.513.A.1)

A. Applicant (Permit-Holder) Cleco Power, LLC Rodemacher Power Station

B. Facility Name: Unit 1 Metal Cleaning Waste Pond

C. Facility Location/Description: 275 Rodemacher Road, Lena, LA 71477

D. Location: Sections 24, 25, 78, 80 Township 5 N Range 3 W

Parish Rapides

Coordinates: Latitude – Degrees 31° Minutes 23' Seconds 42"

Longitude – Degrees 92° Minutes 43' Seconds 00"

E. Mailing Address: 275 Rodemacher Road, Lena, LA 71447

F. Contact: Robert St. Romain, Plant Manager

G. Telephone: (318) 793-1135

H. Type and Purpose of Operation: (check each applicable line)

Type I

Industrial Landfill _____
Industrial Surface Impoundment X
Industrial Landfarm _____

Type I-A

Industrial Incinerator Waste Handling Facility _____
Industrial Shredder/Compactor/Baler _____
Industrial Transfer Station _____

Type II

Sanitary Landfill _____
Residential/Commercial Surface Impoundment _____
Residential/Commercial Landfarm _____

Type II-A

Residential/Commercial Incinerator Waste Handling Facility _____

Residential/Commercial Shredder/Compactor/Baler _____

Residential/Commercial Transfer Station _____

Residential/Commercial Refuse-Derived Fuel _____

Type III

Construction/Demolition-Debris Landfill _____

Woodwaste Landfill _____

Compost Facility _____

Resource Recovery/Recycling Facility _____

Other

Describe _____

I. Site Status: Owned X Leased _____ Lease Term Years

(Note: If leased, provide copy of lease agreement)

J. Operation Status: Existing X Proposed _____K. Total Acreage 6000 Processing Acreage _____ Disposal Acreage ~0.56

L. Environmental Permits: (List)

LPDES LA008036

M. Conformity with regional plans. Attach letter from the Louisiana Resource Recovery and Development Authority (LRRDA) stating that the facility is an acceptable part of the state-wide program.

(Note: La. R.S. 30:2307.(b), LRRDA was repealed by Acts 2001, No.524.

N. Zoned: Yes No X Zoning Requested _____ Zone Classification _____

(Note: If zoned, include zoning affidavit and/or other documentation stating that the proposed use does not violate existing land-use requirements.)

O. Types, Quantities, and Sources of Waste:

	Processing		Disposal	
	Onsite	Offsite	Onsite	Offsite
Residential				
Industrial			See Attached.	
Commercial				
Other				

P. Service Area:

List of Parishes: This facility only receives waste generated at the Cleco Power, LLC Rodemacher Power Station.

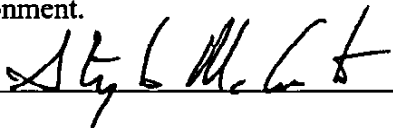
Statewide

Unlimited

Q. Proof of Operator's Public Notice - Attach proof of publication of the notice regarding the permit application submittal as required by LAC 33:VII.513.A.
Attached.

R. Certification: I have personally examined and am familiar with the information submitted in the attached document, and I hereby certify under penalty of law that this information is true, accurate, and complete to the best of my knowledge. I am aware that there are significant penalties for submitting false information, including the possibility of fine and/or imprisonment.

Signature



Date

22 May 2006

Typed Name and Title Steve Carter, Vice President - Regulated Generation

(Note: Attach proof of the legal authority of the signee to sign for the applicant.)

§520. Compliance Information


- A. All applicants for solid waste permits shall comply with the requirements of LAC 33:I.1701.

The completed 1701 Form and supporting documentation are attached.

UNIT 1 METAL CLEANING WASTE POND	
FACILITY AND COMPONENTS	QUANTITY OF WASTES
Boiler Cleaning Waste	Max 368,000 gallons during boiler cleaning operation every 3 to 5 years, per unit as needed
Air Heater Waste	Approximately 500,000 gallons/year, 1 to 4 times/year, per unit as needed
Turbine Cleaning Waste	20,000 to 40,000 gallons/cleaning, as needed. Actual depends on number of rinses required to complete cleaning.
Miscellaneous Water Plant Metal Cleaning Waste	2,000 gallons, as needed
Boiler blowdown	0 to 150,000 gallons, as needed

Media Type (check one)

Hazardous Waste ☐ Air ☐Solid Waste ☒ Water ☐Radiation Licensing ☐Agency Interest Number: 2922

Department of Environmental Quality Permits Division P.O. Box 82135 Baton Rouge, LA 70884- 2135 (225) 765-0219	Addendum to Permit Applications Per LAC 33:I.1701																	
Please Type Or Print	<table border="1"> <tr> <td colspan="2">Company Name</td> </tr> <tr> <td colspan="2">Cleco Power, LLC</td> </tr> <tr> <td colspan="2">Parent Company (if Company Name given above is a division)</td> </tr> <tr> <td colspan="2">Cleco Corporation</td> </tr> <tr> <td colspan="2">Plant name (if any)</td> </tr> <tr> <td colspan="2">Rodemacher Power Station</td> </tr> <tr> <td>Nearest town</td> <td>Parish where located</td> </tr> <tr> <td>Lena</td> <td>Rapides</td> </tr> </table>	Company Name		Cleco Power, LLC		Parent Company (if Company Name given above is a division)		Cleco Corporation		Plant name (if any)		Rodemacher Power Station		Nearest town	Parish where located	Lena	Rapides	For Permits Division Use Only
Company Name																		
Cleco Power, LLC																		
Parent Company (if Company Name given above is a division)																		
Cleco Corporation																		
Plant name (if any)																		
Rodemacher Power Station																		
Nearest town	Parish where located																	
Lena	Rapides																	

Use attachments to provide the required information. "NA" is not an acceptable answer. If a particular section does not apply to you, explain why.

1. Please provide a list of the states where you as applicant* have federal or state environmental permits identical to, or of a similar nature to, the permit for which you are applying. **See Attachment 1.**

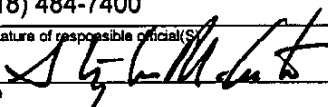
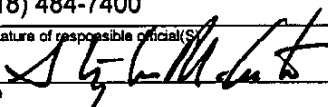
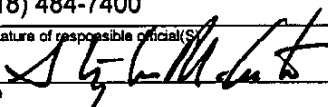
* This requirement applies to all individuals, partnerships, corporations, or other entities who own a controlling interest of 50% or more in your company, or who participate in the environmental management of the facility for an entity applying for the permit or an ownership interest in the permit.

2. Do you owe any outstanding fees or final penalties to the Department? No ☒ Yes ☐ If yes, please explain. **See Attachment 1.**
3. Is your company a corporation or limited liability company? No ☐ Yes ☒ If yes, attach a copy of your company's Certificate of Registration and/or Certificate of Good Standing from the Secretary of State. **See Attachments 1 and 2.**

Certification:

I certify, under provisions in Louisiana and United States law which provide criminal penalties for false statements, that based on information and belief formed after reasonable inquiry, the statements and information contained in this Addendum to the Permit Application, including all attachments thereto are true, and complete.

Responsible Official

<table border="1"> <tr> <td>Name</td> <td>Stephen M. Carter</td> </tr> <tr> <td>Title</td> <td>Vice- President, Regulated Generation</td> </tr> <tr> <td>Company</td> <td>Cleco Power, LLC</td> </tr> <tr> <td>Suite, mail drop, or division</td> <td>NA</td> </tr> <tr> <td>Street or P.O. Box</td> <td>P.O. Box 5000</td> </tr> </table>	Name	Stephen M. Carter	Title	Vice- President, Regulated Generation	Company	Cleco Power, LLC	Suite, mail drop, or division	NA	Street or P.O. Box	P.O. Box 5000	<table border="1"> <tr> <td>City</td> <td>Pineville</td> <td>State</td> <td>LA</td> <td>Zip</td> <td>71361</td> </tr> <tr> <td colspan="6">Business phone</td> </tr> <tr> <td colspan="6">(318) 484-7400</td> </tr> <tr> <td colspan="6">Signature of responsible official(s)</td> </tr> <tr> <td colspan="6"></td> </tr> <tr> <td colspan="6">Date</td> </tr> <tr> <td colspan="6">22 SEP 2006</td> </tr> </table>	City	Pineville	State	LA	Zip	71361	Business phone						(318) 484-7400						Signature of responsible official(s)												Date						22 SEP 2006					
Name	Stephen M. Carter																																																				
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Date																																																					
22 SEP 2006																																																					

The Department may require the submission of additional information if it deems such information necessary.

ATTACHMENT 1

**ADDENDUM TO PERMIT APPLICATIONS
PER LAC 33:1.1701**

ATTACHMENT 1

Addendum to Permit Applications per LAC 33:I.1701

1. Please provide a list of the states where you as a applicant* have federal or state environmental permits identical to, or of a similar nature to, the permit for which you are applying.

Cleco Power, LLC does not have any environmental permits in any states other than Louisiana.

2. Do you owe any outstanding fees or final penalties to the Department? If so, please explain.

Cleco Power, LLC does not owe any fees or penalties to the Louisiana Department of Environmental Quality.

3. Under laws of the state of Louisiana, are you required to register with the Secretary of State? If required to do so, are you registered with the Secretary of State? Please provide proof of registration.

Cleco Power, LLC is required to register with the Louisiana Secretary of State. A copy of Cleco Power, LLC's certification of registration is located in Attachment 2.

*This requirement applies to all individuals, partnership, corporations, or other entities who own a controlling interest if 50% or more in your company, or who participate in the environmental management of the facility for an entity applying for the permit or an ownership interest in the permit.

ATTACHMENT 2

ADDENDUM TO PERMIT APPLICATIONS
PER LAC 33:I.1701

CERTIFICATE OF REGISTRATION

United States of America State of Louisiana



As Secretary of State, Al Ater, I do hereby Certify that

CLECO CORPORATION

A corporation domiciled in PINEVILLE, LOUISIANA,

Filed charter and qualified to do business in this State on
October 30, 1998,

I further certify that the records of this Office indicate
the corporation has paid all fees due the Secretary of
State, and so far as the Office of the Secretary of State is
concerned is in good standing and is authorized to do
business in this State.

I further certify that this Certificate is not intended to
reflect the financial condition of this corporation since
this information is not available from the records of this
Office.

In testimony whereof, I have hereunto set
My hand and caused the Seal of my Office
To be affixed at the City of Baton Rouge on,
September 19, 2006

Secretary of State
34702181D




Certificate ID: 20060919004054

To validate this certificate, visit the following web site,
go to **Commercial Division, Validate Certificate**, then
follow the instructions displayed.
www.sos.louisiana.gov

CONSULTANT'S AUTHORIZATION

Cleco Power, LLC, Rodemacher Power Station, Boyce, Louisiana, hereby authorizes Eagle Environmental Services, Inc., Baton Rouge, Louisiana (Eagle), to serve as environmental consultant to and representative of Cleco Power, LLC. Eagle is further authorized to submit documents on behalf of Cleco Power, LLC and to act as Cleco's agent in that regard.

Cleco Power, LLC

A handwritten signature in dark ink, appearing to read "Steve Carter", is written over a horizontal line.

Steve Carter
Vice President – Regulated Generation

CERTIFICATION OF COMPLIANCE

I certify under penalty of law that I have personally examined and I am familiar with the information submitted in this permit application and that the facility as described in this permit application meets the requirements of the Solid Waste Rules and Regulations. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment.

Cleco Power, LLC



Steve Carter

Vice President – Regulated Generation

22 Sept 2006

Date

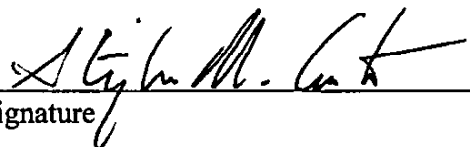
PROOF OF LEGAL SIGNATORY AUTHORITY

WHEREAS certain federal and state environmental law require certain permit applications, reports, or other documents to be executed on behalf of a corporation by a Principal Corporate Officer or by an official having significant policy or decision-making responsibility:

and

WHEREAS the Plant Manager in the responsible charge of Cleco Power, LLC, Rodemacher Power Station, Boyce, Louisiana, is an official having significant policy and decision-making responsibilities within the Company:

NOW, THEREFORE, I, Stephen M. Carter, Vice-President – Regulated Generation, of Cleco Power, LLC, on this 22 day of September, 2006, do hereby Authorize the Plant Manager of Cleco Power, LLC, Rodemacher Power Station, Boyce, Louisiana, to execute any such permit applications, reports, and other documents on behalf of Cleco Corporation.

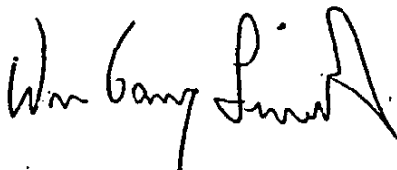


Signature

**APPENDIX D
CERTIFICATION**

On behalf of M.S. Environmental Consultants, I, Wm. Gary Smith, P.E., make this certification as a registered Professional Engineer, Licensed in Louisiana. This certification is for an amended application to the Louisiana Department of Environmental Quality for a Solid Waste Disposal Permit. This application is for surface impoundments at Rodemacher Power Plant and is submitted by Central Louisiana Electric Company, Inc.

I certify under penalty of law that I have personally examined and I am familiar with the information submitted in this amended permit application. In accordance with the original certification, the facility as described in this amended permit application meets the requirements of the Solid Waste Rules and Regulations. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment.

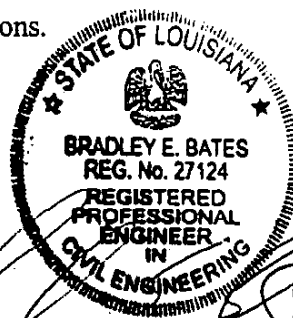


Wm. Gary Smith, P.E.
Louisiana Registration No. 16653



ENGINEERING CERTIFICATION

I certify, based on my review of this permit document and the attached plans and figures, that this application for renewal of the Solid Waste Permit is in agreement with the plans, specifications, and operations as originally submitted for the Unit 1 Metal Cleaning Waste Pond at the Cleco Power, LLC Rodemacher Power Station. I have found that the facility meets the requirements outlined in the Louisiana Solid Waste Rules and Regulations.



Bradley E. Bates
Professional Engineer

Date 9/20/06 Registration No. 27124 State LA

3.0 LAC 33:VII.521. PART II: SUPPLEMENTARY INFORMATION, ALL PROCESSING AND DISPOSAL FACILITIES

The following information is required in the permit application for solid waste processing and disposal facilities. All responses and exhibits must be identified in the following sequence to facilitate the evaluation. Additionally, all applicable sections of LAC 33:VII.Chapter 7 must be addressed and incorporated into the application responses. If a section does not apply, the applicant must state that it does not apply and explain why.

A. Location Characteristics. Standards pertaining to location characteristics are contained in LAC 33:VII.709.A (Type I and II facilities), LAC 33:VII.717.A (Type I-A and II-A facilities, and LAC 33.719.A (Type III facilities).

I. The following information on location characteristics is required for all facilities:

- a. Area Master Plans. A location map showing the facility, road network, major drainage systems, drainage-flow patterns, location of closest population center(s), location of the public-use airport(s) used by turbojet aircraft or piston-type aircraft, proof of notification of affected airport and Federal Aviation Administration as provided in LAC 33:VII.709.A.2, location of the 100-year flood plain, and other pertinent information. The scale of the maps and drawings must be legible, and engineering drawings are required.**

A site location map containing the information required by this regulation is provided as Figure 1. A map of the Rodemacher Power Station is included as Figure 2. The 100-year flood plain is specifically identified in Figure 3. Proof of notification of an affected airport and Federal Aviation Administration under LAC 33:VII.709.A.2 is not required as the application is for a Type I facility that will handle only nonputrescible solid waste.

The facilities will be accessible at all times by all-weather roads that will meet the demands of the facility and the roads are constructed to avoid congestion, sharp turns, obstructions, or other hazards conducive to accidents. All roads are adequate to withstand the weight of transportation vehicles.

- b. A letter from the appropriate agency or agencies regarding those facilities receiving waste generated off-site, stating that the facility will not have a significant adverse impact on the traffic flow of area roadways and that the construction, maintenance, or proposed upgrading of such roads is adequate to withstand the weight of the vehicles.**

Not applicable. Cleco does not receive waste generated off site.

- c. Existing Land Use. A description of the total existing land use within three miles of the facility (by approximate percentage) including, but not limited to:**

- i. residential;**

- ii. health-care facilities and schools;
- iii. agricultural;
- iv. industrial and manufacturing;
- v. other commercial;
- vi. recreational; and
- vii. undeveloped.

The existing land use within this radius is predominantly undeveloped (45%) or agricultural (25%). The only significant industrial use is the Rodemacher Power Station (22-23%) and the adjacent Boise Cascade facility (5%). Approximately 2-3% of the area is residential or commercial.

- d. **Aerial Photograph.** A current aerial photograph, representative of the current land use, of a one-mile radius surrounding the facility. The aerial photograph shall be of sufficient scale to depict all pertinent features. (The administrative authority may waive the requirement for an aerial photograph for Type III facilities.)

Please see Figure 4 for an aerial map showing a one-mile radius around the facility.

- e. **Environmental Characteristics.** The following information on environmental characteristics:
 - i. a list of all known historic sites, recreation areas, archaeologic sites, designated wildlife-management areas, swamps and marshes, wetlands, habitats for endangered species, and other sensitive ecologic areas within 1,000 feet of the facility perimeter or as otherwise appropriate;
 - ii. documentation from the appropriate state and federal agencies substantiating the historic sites, recreation areas, archaeologic sites, designated wildlife-management areas, wetlands, habitats for endangered species, and other sensitive ecologic areas within 1,000 feet of the facility; and
 - iii. a description of the measures planned to protect the areas listed from the adverse impact of operation at the facility;

There are no known historic sites, recreation areas, designated wildlife-management areas, swamps and marshes, habitats for endangered species, and other sensitive ecologic areas within 1,000 feet of the facility

perimeter. The facility is located in proximity to wetlands previously permitted by the United States Army Corp of Engineers (COE) New Orleans District and subsequently, given approval by the LDEQ, for construction of a solid waste management unit. There is one archaeological site (RA113), approximately 900 feet to the north of the area. According to the Louisiana State Historic Preservation Office records, RA113 is not a defined site which is eligible for the National Register. The location of the proposed facility within the existing perimeter levee system precludes site operations from affecting this area. A site location map is provided as Figure 1. Correspondence from the COE, the State Historic Preservation Office, United States Fish and Wildlife Service, and Louisiana Department of Wildlife and Fisheries is provided in Appendix A.

f. A wetlands demonstration, if applicable, as provided in LAC 33:VII.709.A.4.

A wetland demonstration, as provided in LAC 33:VII.709.A.4 is not applicable because the facility has received wastes prior to October 9, 1993.

g. Demographic Information. The estimated population density within a three-mile radius of the facility boundary, based on the latest census figures.

The population within a one-mile radius of the proposed project boundaries consists of 101 people. The largest incorporated town within a 5-mile radius of the site is Boyce, which has a population of 1,190, based on the 2000 U.S. Census. The data sheets are included as Appendix B.

2. The following information regarding wells, faults and utilities is required for Type I and II facilities:

a. Wells. Map showing the locations of all known or recorded shot holes and seismic lines, private water wells, oil and/or gas wells, operating or abandoned, within the facility and within 2,000 feet of the facility perimeter and the locations of all public water systems, industrial water wells, and irrigation wells within one mile of the facility. A plan shall be provided to prevent adverse effects on the environment from the wells and shot holes located on the facility.

There are three plugged and abandoned oil and/or gas wells within 2,000 feet of the perimeter. The location of these three wells in addition to any public water systems, industrial water wells, and irrigation wells within one mile of the facility is included in Appendix C. The list of the wells and other available data, such as well depth, completion data, aquifer name, present status and owner's name are included in Appendix C.

b. Faults

i. scaled map showing the locations of all recorded faults within the facility and within one mile of the perimeter of the facility; and

- ii. **demonstration, if applicable, of alternative fault set-back distance as provided in LAC 33:VII.709.A.5.**

There are no known faults within the facility or within a one mile of the perimeter of the facility. A review of available published literature, including the 1984 Geologic Map of Louisiana (C.C. Groat, Director, Louisiana State Geological Survey), did not reveal data on faulting near the facility. Over 50 soil borings have been conducted at the facility and faults have not been noted within the facility. The Rodemacher Power Station is not located in an unstable area.

- c. **Utilities. Scale map showing the location of all pipelines, power lines, and right-of-ways within the site.**

A detailed map showing the location of all pipelines, power lines and right of ways within the property boundaries is included as Figure 2.

- B. **Facility Characteristics. Standards concerning facility characteristics are contained in LAC 33:VII.709.B (Type I and II facilities), LAC 33:VII.717.B (Type I-A and II-A facilities), and LAC 33:VII.719.B (Type III facilities). A facility plan, including drawings and a narrative, describing the information required below must be provided.**

Cleco has addressed the standards concerning facility characteristics under LAC 33:VII.709.B.

- 1. **The following information is required for all facilities:**

- a. **elements of the process or disposal system employed, including, as applicable, property lines, original contours (shown at not greater than five-foot intervals), buildings, units of the facility, drainage, ditches and roads;**

See Figure 1 for a site location map and Figure 2 for a facility map. All operations occur within the property boundaries. Drawings with original contours are addressed in the responses to LAC 33:VII.521.F.2.

- b. **the perimeter barrier and other control measures;**

Facility security is addressed within the Facility Operational Plan (Appendix D). As stated within that Plan, the proposed facility will be located within the RPS site. All visitors to the plant are required to check in at the front gate and must be escorted by company personnel at all times. In addition, unauthorized entry to the facility is minimized by perimeter features including fencing in open areas, and natural deterrents such as Lake Rodemacher and portions of heavily wooded areas.

- c. **a buffer zone;**

The proposed facility will be located within the RPS and will be provided with a minimum 200-foot buffer zone to the fenced property line.

d. fire-protection measures;

Fire protection measures for the proposed facility and the entire RPS site are addressed within the Facility Operational Plan (Appendix D) and the site Emergency Response Action Plan (ERAP) as provided in Appendix E of this application.

e. landscaping and other beautification efforts;

In accordance with LAC 33:VII.709.B.4, facilities located within the boundaries of a plant, industry, or business that generates the waste to be processed or disposed of, are not required to provide landscaping. Cleco, though, will continue to provide all efforts to minimize adverse aesthetic impacts to the surrounding area.

f. devices or methods to determine, record, and monitor incoming waste;

Not applicable. Internal recordkeeping procedures for the proposed facility are provided within the Facility Operational Plan (Appendix D).

g. NPDES discharge points (existing and proposed); and

RPS is currently operating under LPDES permit number LA008036, which became effective on April 1, 2006. An addendum has been sent to LDEQ to include anticipated changes in operations due to the installation of Solid Fuel Unit Number 3. A detailed map of existing outfalls for the RPS has been included as Figure 5.

h. other features, as appropriate.

Additional features related to the operation of the facilities are discussed in response to the specific regulatory requirements provided herein.

2. The following information is required for Type I and II facilities:

a. areas for isolating nonputrescible waste or incinerator ash, and borrow areas; and

No areas will be isolated for nonputrescible waste and incinerator ash. There will also be no borrow areas.

b. location of leachate collection/treatment/removal system.

Leachate collection is not applicable to surface impoundments

- C. Facility Surface Hydrology.** Standards governing facility surface hydrology are contained in LAC 33:VII.711.A (Type I and II landfills), LAC 33:VII.713.A (Type I and II surface impoundments), LAC 33:VII.715.A (Type I and II landfarms), LAC 33:VII.717.C. (Type I-A and II-A facilities), and LAC 33:VII.719.C (Type III facilities).

1. The following information regarding surface hydrology is required for all facilities:

- a. a description of the method to be used to prevent surface drainage through the operating areas of the facility;**

The topographic setting of the Unit 1 Metal Cleaning Waste Pond is such that no significant surface drainage will be toward the pond. No surface water streams pass through the pond.

- b. a description of the facility runoff/run-on collection system;**

The Unit 1 Metal Cleaning Waste Pond was constructed by building levee across a low area. On the southern side, drainage flows naturally away from the impoundment while on the northern side the levee prevents run-on and run-off.

- c. the maximum rainfall from a 24-hour/25-year storm event;**

The maximum rainfall from a 24-hour/25-year storm event is approximately 9 inches. This information was obtained from *Rainfall Frequency/Magnitude Atlas for the South-Central United States*, SRCC technical Report 97-1, Geosciences Publications Department of Geography and Anthropology Louisiana State University, Baton Rouge, LA.

- d. the location of aquifer recharge areas in the site or within 1,000 feet of the site perimeter, along with a description of the measures planned to protect those areas from the adverse impact of operations at the facility; and**

The RPS facility overlies a portion of the aquifer recharge area for both the Pleistocene Terrace aquifer of the central and north Louisiana and the Alluvial aquifer, as shown in Appendix F. The majority of the RPS is located on the aquifer recharge area for the Terrace aquifer. The Unit 1 Metal Cleaning Waste Pond, the Coal Sedimentation Pond, and the Unit 2 Metal Cleaning Waste Pond are situated on the Terrace aquifer, while the Fly Ash Pond, Bottom Ash Pond, and Ash Management Area are situated on the aquifer recharge area for the Alluvial aquifer.

- e. if the facility is located in a flood plain, a plan to ensure that the facility does not restrict the flow of the 100-year base flood or significantly reduce the temporary water-storage capacity of the flood plain, and documentation indicating that the design of the facility is such that the flooding does not affect the integrity of the facility or result in the washout of solid waste.**

The Fly Ash Pond is the only facility that is constructed within an area previously permitted through the Army Corps of Engineers (COE) under permit number LMNOD-SP dated March 29, 1977. Cleco currently holds a solid waste permit from the LDEQ for this area to manage ash for future plant expansions.

D. Facility Geology. Standards governing facility geology are contained in LAC 33:VII.709.C (Type I and II facilities), LAC 33:VII.717.D (Type I-A and II-A facilities), and LAC 33:VII.719.D (Type III facilities).

I. The following information regarding geology is required for Type I and Type II facilities:

a. isometric profile and cross-sections of soils, by type, thickness, and permeability;

Isometric soil profiles and geologic cross sections have been constructed for the facilities from available data. The locations of the profiles for the cross sections are shown in Appendix G. Five (5) isometric soil profiles and sixteen (16) geologic cross sections, A-A' through P-P', were constructed from available data and are included in this appendix. Historical geologic cross sections constructed for the facilities are also included in Appendix H.

b. logs of all known soil borings taken on the facility and a description of the methods used to seal abandoned soil borings;

A copy of the logs of soil borings is included in Appendix I. Please note that the soil boring logs performed by Aquaterra (2004) and Eagle (2005) are included in this appendix. Soil boring logs were not available for the drilling activities performed by Sargent & Lundy (1981); however, geologic cross sections illustrating these logs are available and are included. Design and construction of the units began before the Louisiana Solid Waste Rules and Regulations were established and the units were initially under interim status prior to the standard permits being issued.

Abandoned soil borings were sealed in accordance with applicable methods at the time of drilling according to available records reviewed. Since May 1993, soil borings have been sealed in accordance with applicable portions of "Construction of Geotechnical Boreholes and Groundwater Monitoring Systems Handbook" dated May 1993 (LDEQ and LDOTD, 1993) and later revised, dated December 2000 (LDEQ and LDOTD, 2000).

c. results of tests for classifying soils (moisture contents, Atterberg limits, gradation, etc.), measuring soil strength, and determining the coefficients of permeability, and other applicable geotechnical tests;

A copy of available geotechnical testing used for soil classification is included in Appendix I.

- d. **geologic cross-section from available published information depicting the stratigraphy to a depth of at least 200 feet below the ground surface;**

A fence diagram illustrating Rapides Parish geology to approximately 3,000 feet below ground surface is included as Appendix F. (Plate 4, Water Resources of Rapides Parish, Louisiana, Water Resources Bulletin No. 8, Department of Conservation, Louisiana Geological Survey, and Louisiana Department of Public Works, April 1966).

- e. **for faults mapped as existing through the facility, verification of their presence by geophysical mapping or stratigraphic correlation of boring logs. If the plane of the fault is verified within the facility's boundaries, a discussion of measures that will be taken to mitigate adverse effects on the facility and the environment;**

There are no known faults within the facility or within one mile of the perimeter of the facility. The review of available published information did not reveal information on faulting near the facility.

- f. **for a facility located in a seismic impact zone, a report with calculations demonstrating that the facility will be designed and operated so that it can withstand the stresses caused by the maximum ground motion, as provided in LAC 33:VII.709.C.2; and**

Not applicable. Review of the "Seismicity Map of the State of Louisiana" (Map MF-1081, Stover and others, United States Geological Survey, 1987) does not indicate seismic activity in the area of the Rodemacher Power Station.

- g. **for a facility located in an unstable area, a demonstration of facility design as provided in LAC 33:VII.709.C.3.**

Not applicable. The RPS is not located in an unstable area.

2. **The following information regarding geology is required by Type III wood waste, and construction/demolition-debris facilities:**

- a. **general description of the soils provided by a qualified professional (a geotechnical engineer, soil scientist, or geologist) along with a description of the method used to determine soil characteristics; and**
- b. **logs of all known soil borings taken on the facility and a description of the methods used to seal abandoned soil borings.**

Not applicable. The application is for a Type I facility.

- E. Facility Subsurface Hydrology. Standards governing facility subsurface hydrology are contained in LAC 33:VII.715.A (Type I and II landfarms).**
- 1. The following information on subsurface hydrology is required for all Type I facilities and Type II landfills and surface impoundments:**
- a. delineation of the following information for the water table and all permeable zones from the ground surface to a depth of at least 30 feet below the base of excavation:**
- i. aerial extent beneath the facility;**

The RPS facility is located across two different geomorphologic features (Figure 1). These features consist of Intermediate Terrace deposits of Pleistocene age to the northwest and alluvium and natural levee deposits of Holocene age to the southeast. The Intermediate Terraces are composed of terraces formerly designated as Montgomery, Irene, and Bentley (LGS, 1984; Eagle, 2005). The boundary of the Intermediate Terrace and alluvium/natural levee deposits adjacent to the southwest side of the existing Bottom Ash and Fly Ash Ponds.

The northern portion of the facility is located on the Intermediate Terrace deposits and the remainder of the facility is located on the alluvium/natural levee deposits. Therefore, the uppermost aquifer is actually comprised of two different aquifers that are hydrologically connected. The isometric profiles (Appendix G) provide a comprehensive look at the stratigraphy from the geotechnical soil boring data collected at the site. The geologic cross sections combine both the geotechnical soil boring data and older soil boring data acquired during previous investigations. A map of the soil boring locations is included in Appendix I with the soil boring logs presented in Appendices G and H.

The isometric soil profiles and the geologic cross sections illustrate the difference in stratigraphy and depth to the uppermost water-bearing zone for both the Intermediate Terrace deposits and the alluvium/natural levee deposits. Most easily seen on the isometric profile for the Ash Management Area, soil borings B-4, B-5, and B-6 are representative of the Intermediate Terrace deposits and soil borings B-7 through B-22 are representative of the alluvium/natural levee deposits. The uppermost aquifer within the Intermediate Terrace deposits consists of fine sand in upper parts, grading downward to coarse sand and gravel. The uppermost aquifer within the alluvium/natural levee deposits is described as sandy silt to silty sand often underlain by sandy clay.

The isometric profile and geologic cross-sections also show the connection between the Terrace and alluvial aquifers, indicating that the

uppermost aquifer, while comprised of sediments of two different geologic ages, is laterally continuous across the site.

ii. thickness and depth of the permeable zones and fluctuations;

The thickness and depths of the uppermost aquifer are described below for each solid waste facility:

Unit	Thickness Range (Feet)	Depths to Top/Base (Feet NGVD)
Unit 1 Metal Cleaning Waste Pond	15 – 32	(+)100 / (+)67
Unit 2 Metal Cleaning Waste Pond	10 - 23	(+)110 / (+)89
Coal Sedimentation Pond	12 – 26	(+)91 / (+)66
Bottom Ash Pond	25 – 35	(+)64 / (+)40
Fly Ash Pond	15 – 70	(+)65 / (-)5
Ash Management Area	11 – 62	(+)65 / (+)5

The uppermost aquifer is laterally continuous underlying all of the solid waste facilities, as shown in the geologic cross sections included in Appendix G. Please note that the Unit 1 Metal Cleaning Waste Pond, Unit 2 Metal Cleaning Waste Pond, and Coal Sedimentation Pond are located on the Intermediate Terrace deposits. The Bottom Ash Pond and Ash Management Area are located on the boundary of the Intermediate Terrace deposits and the alluvium/natural levee deposits and the Fly Ash Pond is located on the alluvium/natural levee deposits.

iii. direction(s) and rate(s) of groundwater flow based on information obtained from piezometers and shown on potentiometric maps; and

Groundwater flow at the facility was evaluated at the Rodemacher Power Station using 12 monitoring wells. These are wells W-1 to W-5 and wells W-7 to W-13. A copy of the monitoring well construction diagrams is included in Appendix I.

Horizontal groundwater flow was evaluated in the uppermost aquifer by construction of potentiometric surface maps from data measured in monitoring wells at the Rodemacher Power Station. The locations of these wells are shown in Appendix J. An evaluation of groundwater flow

indicates that horizontal groundwater flow at the facility is consistently towards local surface water bodies with flow towards Lake Rodemacher in the power station portion of the property and towards Bayou Jean de Jean in the area of the Fly Ash Pond, Bottom Ash Pond, and Ash Management Area. Based on USGS topographic quadrangles of Lake Rodemacher area, the spillway elevation of Lake Rodemacher is 100 Feet NGVD. Groundwater elevations determined in monitoring wells near the lake are generally higher than this maximum lake elevation, supporting groundwater flow towards the lake. This is depicted in the groundwater contour maps included in Appendix J.

Groundwater flow rate was evaluated using the groundwater flow equation, $v = [k (dh/dl)] / n_e$. For this equation, v is groundwater flow velocity in ft/day, k is hydraulic conductivity in ft/day, dh/dl is hydraulic gradient in ft/ft, and n_e is effective porosity (unitless).

An hydraulic conductivity (k) value ranging from 10 to 100 ft/day was assumed (Heath, 1989) based on the silty sand and fine- to coarse-grained sand observed in soil cuttings from soil borings completed at the site. An hydraulic gradient (dh/dl) value ranging from 0.0004 to 0.007 ft/ft was used based on potentiometric surface maps. Note that the hydraulic gradient is steeper in the area of the Bottom Ash Pond and Fly Ash Pond (Intermediate Terraces/alluvium natural levee boundary), and flatter in the area of the Unit 1 Metal Cleaning Waste Pond, the Unit 2 Metal Cleaning Waste Pond, and the Coal Sedimentation Pond situated on the Intermediate Terraces. An effective porosity (n_e) of 0.2 was assumed based on the soil types of the uppermost aquifer (Fetter, 2001). Using these values, the groundwater flow rate (v) is estimated to range from 0.02 to 3.5 feet/day.

It is important to note that this is an advective rate and does not take into account potential hydrogeological heterogeneities such as adsorption, biodegradation, dispersion, or other retarding factors in the groundwater flow in this zone. Additionally, variations in the advective flow may occur due to potential lateral geological heterogeneities.

- iv. any change in groundwater flow direction anticipated to result from any facility activities;**

Historical potentiometric maps for the RPS are included in Appendix J. No changes in groundwater flow direction have been noted.

- b. delineation of the following, from all available information, for all recognized aquifers which have their upper surfaces within 200 feet of the ground surface:**

i. areal extent;

Groundwater occurs in three major geohydrologic units in the vicinity of the RPS. From shallow to deep, these regional units include the Red River valley alluvium, the upland sand and gravel Terrace deposits of Pleistocene age; and sand beds in Miocene-age rocks.

The southeastern most part of the site is immediately underlain by the Red River alluvial aquifer. It is comprised of floodplain deposits of the Red River that consist of sand, silt and clay with some gravel. Northwest of the Red River floodplain are topographically higher, older Pleistocene sand and gravel deposits. The upland deposits are mainly composed of fine to coarse sands with an overlying silty clay layer in most localities.

The upland Pleistocene deposits (Intermediate Terrace Aquifer) cover the Miocene rocks with a mantle that varies in thickness from less than 100 feet in the northern part of the parish to 200 feet in the southern part of the parish (Newcome and Sloss, 1966).

In the vicinity of the RPS, the upland Pleistocene deposits are underlain by Miocene age rocks consisting of the Carnahan Bayou Member of the Fleming Formation. The Carnahan Bayou Member is generally sandy and dips southward at 75 to 150 feet per mile, as shown in a generalized fence diagram for Rapides Parish in Appendix F (Newcome and Sloss, 1966, Water Resources of Rapides Parish, Louisiana, Water Resources Bulletin No. 8, Department of Conservation, Louisiana Geological Survey and Louisiana Department of Public Works). A stratigraphic column provides the relationship between geologic formations in Rapides Parish and is shown in Appendix F.

Individual sand beds commonly exist at the base of the sand members in the Miocene rocks. Sand beds are the major aquifers in the Miocene rocks. The sand beds range in thickness from 10 to 230 feet, with an average thickness of approximately 40 feet.

ii. thickness and depth to the upper surface;

According to available literature, the Red River alluvium/alluvial aquifer, in the vicinity of the town of Boyce, Louisiana, can be present from ground surface to depths of 50 to 75 feet below ground surface.

The town of Boyce drilled water well test R-767 and encountered the Miocene age Carnahan Bayou Member of the Fleming Formation at a depth of 262 feet below ground surface (Newcome and Sloss, 1966). In that well, the Carnahan Bayou Member was 31 feet thick.

iii. any interconnection of aquifers; and

Hydrologically, the groundwater in the vicinity of the Rodemacher Power Station is most likely connected to the Red River and Bayou Jean de Jean at shallow depths. There is no evidence, however, to hydrologically connect this shallow aquifer to the much deeper Miocene formation used as a source of drinking water in the vicinity.

iv. direction(s) and rate(s) of groundwater flow shown on potentiometric maps.

According to available published literature, the regional direction of groundwater flow in the Miocene aquifers underlying Rapides Parish is historically east-southeast. Newcome and Sloss, 1966, presented a figure illustrating municipal pumping of groundwater near Alexandria and Lecompte (Appendix F). Based on this data, groundwater flow has been changed toward the pumping centers.

Miocene sands permeability ranges from 90 to 1,000 gallons per day per square foot (Newcome and Sloss, 1966).

2. The following information on subsurface hydrology is required for Type II Landfills. Delineation of the following information for the water table and all permeable zones from the ground surface to a depth of at least 30 feet below the zone of incorporation:

- a. areal extent beneath the facility;**
- b. thickness and depth of the permeable zones and fluctuations;**
- c. direction(s) and rate (s) of groundwater flow based on information obtained from piezometers and shown on potentiometric maps); and**
- d. any change in groundwater flow direction anticipated to result from any facilities activities.**

Not applicable. The application is for a Type I facility, not a Type II landfarm.

F. Facility Plans and Specifications. Standards governing facility plans and specifications are contained in LAC 33:VII.711.B (Type I and II landfills), LAC 33:VII.713.B (Type I and II surface impoundments), LAC 33:VII.715.B (Type I and II landfarms), LAC 33:717.E (Type I-A and II-A facilities), LAC 33:VII.721.A (Type III construction and demolition debris and woodwaste landfills), LAC 33:VII.723.A (Type III composting facilities), and LAC 33:VII.725.A (Type III separation facilities). Standards for groundwater monitoring are contained in LAC 33:VII.709.E (Type I and II facilities).

1. **Certification.** The person who prepared the permit application must provide the following certification:

"I certify under penalty of law that I have personally examined and I am familiar with the information submitted in this permit application and that the facility as described in this permit application meets the requirements of the solid waste rules and regulations. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment."

A certification, in accordance with 33.VII 521.F.1, is provided at the beginning of this permit application.

2. **The following information on plans and specifications is required for Type I and II facilities:**

- a. **detailed plan-view drawing(s) showing original contours, proposed elevations of the base of units prior to installation of the liner system, and boring locations;**

A typical cross section of the Unit 1 Metal Cleaning Waste Pond is shown in *Exhibit 8* in Appendix K. The construction of this pond consisted of an irregular shallow excavation with the excavated material being used to form the dikes. This would have put the original grade at 105 feet NGVD. After excavation, the final grade of pond bottom is at approximately 100 feet NGVD, and the top of the dikes at approximately 110 feet NGVD.

- b. **detailed drawings of slopes, levees, and other pertinent features; and**

The design of the Unit 1 Metal Cleaning Waste Pond involved shallow dredging and the formation of a dike around the excavation with the dredged material. The construction of the dike around the impoundment followed good engineering practice. The size of the excavation and the freeboard of the surrounding dike are sufficient to contain any quantity of waste plus any extraordinary rainfall event.

A subsurface profile of the soil under the area of the clarifier sludge ponds and the Unit 1 Metal Cleaning Waste Pond is included as *Exhibit 9* in Appendix K. This protection is afforded by the capacity of the clay to prevent the movement of contaminants downward to groundwater.

- c. **the type of material and its source for levee construction. Calculations shall be submitted demonstrating that an adequate volume of material is available for the required levee construction.**

The levees were constructed from on-site materials. Since additional construction is not anticipated, calculations are not applicable.

3. **The following information on plans and specifications is required for Type I, II, and III landfills:**

- a. approximate dimensions of daily fill and cover; and
Not applicable.
 - b. the type of cover material and its source for daily, interim, and final cover. Calculations shall be submitted demonstrating that an adequate volume of material is available for daily, interim, and final cover.
Not applicable.
4. The following information on plans and specifications for the prevention of groundwater contamination must be submitted for Type I and II facilities:
 - a. representative cross-sections and geologic cross-sections showing original and final grades, approximate dimensions of daily fill and cover, drainage, the water table, groundwater conditions, the location and type of liner, and other pertinent information;

For the Unit 1 Metal Cleaning Waste Pond, a typical cross section is included as *Exhibit 9* in Appendix K. The facility relies upon the naturally occurring low-permeability soil in the area of the impoundment to prevent groundwater contamination.
 - b. a description of the liner system, which shall include: calculations of anticipated leachate volumes, rationale for particular designs of such systems, and drawings; and

The impoundment was constructed of naturally occurring silty clays at the site. An engineered liner system was not included as part of the original design of the facility.
 - c. a description of the leachate collection and removal system, which shall include calculations of anticipated leachate volumes, rationale for particular designs of such systems, and drawings.

No leachate collection and/or treatment system is designed for this facility since its operation will contain liquids.
5. The following information on plans and specifications for groundwater monitoring must be provided for Type I and II facilities:

The groundwater monitoring program was developed in accordance with LAC 33:VII.709.E. The detailed *Groundwater Sampling and Analysis Plan* is included as Appendix L.
 - a. a minimum of three piezometers or monitoring wells in the same zone must be provided in order to determine groundwater flow direction;

The groundwater monitoring system will consist of 22 monitoring wells. The wells are for the intended purpose of monitoring the uppermost aquifer. Monitoring wells W-1, W-2 and W-22 are upgradient wells that have not been affected by leakage from the units and, therefore, represent the quality of background groundwater. Please refer to the Groundwater Sampling and Analysis Plan and *Exhibit 1* of that document presented in Appendix L.

- b. **for groundwater monitoring wells, cross-sections illustrating construction of wells, a scaled map indicating well locations and the relevant point of compliance, and pertinent data on each well, presented in tabular form, including drilled depth, the depth to which the well is cased, screen interval, slot size, elevations of the top and bottom of the screen, casing size, type of grout, ground surface elevation, etc.;**

A comprehensive Groundwater Sampling and Analysis Plan is included in Appendix L. This document includes a monitoring well location map with the relevant point of compliance shown.

- c. **a groundwater monitoring program including a sampling and analysis plan that includes consistent sampling and analysis procedures that ensure that monitoring results provide reliable indications of groundwater quality;**

A comprehensive Groundwater Sampling and Analysis Plan for the Rodemacher Power Station site, which addresses the information required in LAC 33:VII.709.E.1, is included in Appendix L. Cleco intends to utilize a single system for monitoring solid waste facilities.

- d. **for an existing facility, all data on samples taken from monitoring wells in place at the time of the permit application must be included. (If this data exists in the department records, the administrative authority may allow references to the data in the permit application.) For an existing facility with no wells, groundwater data shall be submitted within 90 days after the installation of monitoring wells. For a new facility, groundwater data (one sampling event) shall be submitted before waste is accepted;**

A comprehensive Groundwater Sampling and Analysis Plan for the RPS site, which addresses the information required in LAC 33:VII.709.E.1, is included in Appendix L. Cleco intends to utilize a single system for monitoring the solid waste permitted facilities at the RPS. Copies of historical groundwater quality are on file with the Department.

- e. **a plan for detecting, reporting, and verifying changes in groundwater; and**

A comprehensive Groundwater Sampling and Analysis Plan for the RPS site, which addresses the information required in LAC 33:VII.709.E.1, is included in Appendix L. Cleco intends to utilize a single system for monitoring the solid waste permitted facilities at the RPS.

- f. the method for plugging and abandonment of groundwater monitoring systems.

Cleco will comply with all of the necessary well plugging and abandonment requirements. All wells, piezometers, and soil borings will be plugged and abandoned in accordance with LAC 70:XIII and the *Construction of Geotechnical Boreholes and Groundwater Monitoring Systems Handbook*, prepared by the Louisiana Department of Environmental Quality and Louisiana Department of Transportation and Development, December 2000 or most recent update.

6. The facility plans and specifications for Type I and II landfills and surface impoundments (surface impoundments with on-site closure and a potential to produce gases) must provide a gas collection and treatment or removal system.

Not applicable. A gas collection and treatment or removal system is not provided because surface impoundments do not have a potential to produce any gases.

- G. Facility Administrative Procedures. Standards governing facility administrative procedures are contained in LAC 33:VII.711.C (Type I and II landfills), LAC 33:VII.713.C (Type I and II surface impoundments), LAC 33:VII.715.C (Type I and II landfarms), LAC 33:VII.717.F (Type I-A and II-A facilities), LAC 33:VII.721.B (Type III construction and demolition debris and woodwaste landfills), LAC 33:VII.723.B (Type III composting facilities), and LAC 33:VII.725.B (Type III separation facilities).

- I. The following information on administrative procedures is required for all facilities:

- a. recordkeeping system; types of records to be kept; and the use of records by management to control operations;

Cleco will keep the following records:

- Annual reports of the Administrative authority indicating on-site activities
- Copy of the current Louisiana Solid Waste Rules & Regulations
- Permit applications
- Permit modifications
- Operating Logs
- Groundwater Monitoring Reports
- Waste Analysis Records
- Copies of documents submitted to or received from LDEQ
- Other data subsequently required by the Administrative Authority
- Records of waste generated and disposed of in the impoundment
- Certified field notes for construction
- Operator training programs
- QA/QC records
- Inspection by the permit holder or operator
- Post-closure monitoring reports

All records will be maintained for the life of the facility and shall be kept on file for at least three years after closure.

- b. **an estimate of the minimum personnel, listed by general job classification, required to operate the facility; and**

The station operators will be the key personnel responsible for operating these facilities.

- c. **maximum days of operation per week and per facility operating day (maximum hours of operation within a 24-hour period).**

The Rodemacher Power Station is operated and manned 24 hours a day, 7 days per week.

2. **Administrative procedures for Type II facilities shall include the number of facility operators certified by the Louisiana Solid Waste Operator Certification and Training Program (R.S. 37:3151 et seq.).**

Not applicable. This application is for a Type I facility.

- H. **Facility Operational Plans. Standards governing facility operational plans are contained in LAC 33:VII.711.D (Type I and II landfills), LAC 33:VII.713.D (Type I and II surface impoundments), LAC 33:VII.715.D (Type I and II landfarms), LAC 33:VII.717.G (Type I-A and II-A facilities), LAC 33:VII.721.C (Type III construction and demolition debris and woodwaste landfills), LAC 33:VII.723.C (Type III composting facilities), and LAC 33:VII.725.C (Type III separation facilities).**

The Facility Operational Plan for the facility is provided as Appendix D of this application and addresses the requirements of LAC 33:VII.521.H, LAC 33:VII.711.D, and LAC 33:VII.713.D. Explanations for specific requirements that are not applicable to the Operational Plan for the proposed facility are provided below.

- I. **The following information on operational plans is required for all facilities:**

- a. **types of waste (including chemical, physical, and biological characteristics of industrial wastes generated on-site), maximum quantities of wastes per year, and sources of waste to be processed or disposed of at the facility;**

The Unit 1 Metal Cleaning Waste Pond receives wastewater which results from the cleaning of metal process equipment including boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning, and miscellaneous metal cleaning waste. The types and quantities of waste expected to be pumped to the Unit 1 Metal Cleaning Waste Pond are as follows:

*Cleco Power LLC
Rodemacher Power Station*

*Permit P-0027
Solid Waste Standard Permit Application*

<u>Type / Source</u>	<u>Quantity</u>
Boiler Cleaning Waste	Max 368,000 gallons during boiler cleaning operation every 3 to 5 years* per cleaning, per unit as needed
Air Heater Wash	Approx. 20,000 to 40,000 gallons/cleaning 1 to 4 times per year, per unit as needed. Actual depends on number of rises required to complete cleaning.
Turbine Cleaning Waste	20,000 gallons, as needed
Boiler Blowdown	0 to 150,000 gallons, as needed

* The power station currently evaporates the boiler cleaning waste in the boiler after collection in frac tanks. Should this authorization change, the waste would again be managed in the impoundment.

b. waste-handling procedures from entry to final disposition, which could include shipment of recovered materials to a user;

The wastes that flow to the Unit 1 Metal Cleaning Waste Pond are generated by the chemical cleaning or mechanical cleaning of the Unit 1 and Unit 3 equipment. During this operation the lower headers of the unit are connected to the drain line which leads to the Unit 1 Metal Cleaning Waste Pond. The connection allows the metal cleaning waste to drain by gravity to the Unit 1 Metal Cleaning Waste Pond. Flow is controlled by a valve at the connection of the metal cleaning waste drain line and at each of the lower header connections.

The metal cleaning waste pond is operated only as needed, usually once every three to five years. There is no waste handling monitoring of the Unit 1 Metal Cleaning Waste Pond other than the discharge from it under the LPDES permit.

The pH of the pond may require adjustment from time to time to meet the LPDES discharge permits.

c. minimum equipment to be furnished at the facility;

No special operational equipment is needed for the operation of the Unit 1 Metal Cleaning Waste Pond.

d. plan to segregate wastes, if applicable;

Not applicable.

- e. **procedures planned in case of breakdowns, inclement weather, and other abnormal conditions (including detailed plans for wet-weather access and operations);**

Operation of the Unit 1 Metal Cleaning Waste Pond is not influenced by inclement weather.

If a breakdown occurred in the pumps, the Unit 1 Metal Cleaning Waste Pond would not receive waste until repairs were made to the pump.

- f. **procedures, equipment, and contingency plans for protecting employees and the general public from accidents, fires, explosions, etc., and provisions for emergency care should an accident occur (including proximity to a hospital, fire and emergency services, and training programs); and**

The only type of emergency event which could affect the Unit 1 Metal Cleaning Waste Pond would be the failure of a valve or a conduit. If any of these situations did occur, generation of the waste would be suspended until repairs could be made, or temporary equipment such as pumps and hoses would be employed.

The operation of the Unit 1 Metal Cleaning Waste Pond and the character of the dry waste are not subject to fire or explosion.

A copy of the Emergency Plan is included as Appendix E.

- g. **provisions for controlling vectors, dust, litter, and odors.**

Not applicable. The method of transportation, placement, and physical nature of the solid waste to be disposed of in the facilities will minimize the potential to become airborne as dust or trash requiring litter control. The characteristics of the waste will not attract vectors, and will not require routine inspections of the proposed facility for potential odors. In the event that odors are present, various methods are available to control or eliminate them.

2. The following information on operational plans is required for Type I and II facilities:

- a. **a comprehensive operational plan describing the total operation, including (but not limited to) inspection of incoming waste to ensure that only permitted wastes are accepted (Type II landfills must provide a plan for random inspection of incoming waste loads to ensure that hazardous wastes or regulated PCB wastes are not disposed of in the facility.); traffic control; support facilities; equipment operation; personnel involvement; and day-to-day activities. A quality-assurance/quality-control [QA/QC] plan shall be provided for facilities receiving industrial waste; domestic-sewage sludge; incinerator ash; friable asbestos; nonhazardous petroleum-contaminated media; and debris generated from underground storage tanks [UST], corrective action, or other special wastes as determined by the administrative**

authority. The QA/QC plan shall include (but shall not be limited to) the necessary methodologies; analytical personnel; preacceptance and delivery restrictions; and appropriate responsibilities of the generator, transporter, processor, and disposer. The QA/QC plan shall ensure that only permitted, nonhazardous wastes are accepted;

The Operational Plan is included in Appendix D. The facilities do not receive waste from offsite.

The impoundment wastes are collected from the cleaning of the power generation equipment, which consists of the boiler, air preheater, and the turbine, and miscellaneous water plant metal cleaning waste. The wastes are primarily composed of rust and copper.

As the boiler is used to produce steam, impurities in the boiler water accumulate and adhere to the internal surfaces of the boiler water circuits. Chemical cleaning agents are used to dissolve these accumulated impurities in the boiler.

The waste and rinse water for the above services are routed to the Unit 1 Metal Cleaning Waste Pond. Some of the larger suspended solids will settle out in this pond. A pipeline permits gravity flow to the pond. A physical connection is required in order to discharge into the pond. This practice ensures that no authorized materials are disposed of within the pond.

The use of acid or alkaline product is sometimes required for pH neutralization prior to discharge through LPDES outfall.

b. salvaging procedures and control, if applicable; and

Not applicable.

The liquid waste in the Unit 1 Metal Cleaning Waste Pond is unsalvageable. It offers no recoverable energy alternative from the refuse and is not suitable for composting.

c. scavenging control.

Not applicable. Access to the Rodemacher Power Station is restricted; scavenging will not be conducted or allowed by facility personnel or off-site personnel granted entry into the Rodemacher Power Station.

3. The following information on operational plans is required for Type I and II landfarms:

a. items to be submitted regardless of land use:

- i. a detailed analysis of waste, including (but not limited to) pH, phosphorus, nitrogen, potassium, sodium, calcium, magnesium,**

- sodium-adsorption ratio, and total metals (as listed in LAC 33:VII.715.D.3.b);
- ii. soil classification, cation-exchange capacity, organic matter, content in soil, soil pH, nitrogen, phosphorus, metals (as listed in LAC 33:VII.715.D.3.b), salts, sodium, calcium, magnesium, sodium-adsorption ratio, and PCB concentrations of the treatment zone;
- iii. annual application rate (dry tons per acre) and weekly hydraulic loading (inches per acre); and
- iv. an evaluation of the potential for nitrogen to enter the groundwater;
- b. items to be submitted in order for landfarms to be used for food-chain cropland:
 - i. a description of the pathogen-reduction method for septage, domestic sewage sludges, and other sludges subject to pathogen production;
 - ii. crops to be grown and the dates for planting;
 - iii. PCB concentrations in waste;
 - iv. annual application rates of cadmium and PCBs; and
 - v. cumulative applications of cadmium and PCBs;
- c. items to be submitted for landfarms to be used for nonfood-chain purposes:
 - i. description of the pathogen-reduction method in septage, domestic sewage sludges, and other sludges subject to pathogen production; and
 - ii. description of control of public and livestock access.

Not applicable.
- 4. The following information on operational plans is required for Type I-A and II-A incinerator waste-handling facilities and refuse-derived energy facilities:
 - a. a description of the method used to handle process waters and other water discharges which are subject to NPDES permit and state water discharge permit requirements and regulations; and
 - b. a plan for the disposal and periodic testing of ash (all ash and residue must be disposed of in a permitted facility).

Not applicable. Cleco is not proposing to operate a Type I-A or II-A facility as part of this application.

- 5. The following information on operational plans is required for Type I-A and II-A refuse-derived fuel facilities and Type III separation and composting facilities:**

- a. a description of the testing to be performed on the fuel or compost; and**
- b. a description of the uses for and the types of fuel/compost to be produced.**

Not applicable. This application is for a Type I facility.

- 6. The operational plans for Type I-A and II-A refuse-derived fuel facilities and Type III separation and composting facilities must include a description of marketing procedures and control.**

Not applicable. This application is for a Type I facility.

- 7. The operational plans for Type I and II facilities receiving waste with a potential to produce gases must include a comprehensive air monitoring plan.**

Not applicable. The facility will not receive wastes with potential to produce gases.

- I. Implementation Plan. Standards governing implementation plans are contained in LAC 33:VII.709.D (Type I and II facilities), LAC 33:VII.717.H (Type I-A and II-A facilities), and LAC 33:VII.719.E (Type III facilities).**

- 1. The implementation plans for all facilities must include the following:**

- a. a construction schedule for existing facilities which shall include beginning and ending time-frames and time-frames for the installation of all major features such as monitoring wells and liners. (Time-frames must be specified in days, with day one being the date of standard permit issuance); and**

Not applicable. Since new construction is not anticipated, a schedule is not applicable.

- b. details on phased implementation if any proposed facility is to be constructed in phases.**

Not applicable. The facilities will not be constructed in phases.

- 2. The implementation plans for Type I and II facilities must include a plan for closing and upgrading existing operating areas if the application is for expansion of a facility or construction of a replacement facility.**

Not applicable. The existing facilities will not be closed or upgraded.

- J. Facility Closure.** Standards governing facility closure are contained in LAC 33:VII.711.E (Type I and II landfills), LAC 33:VII.713.E (Type I and II surface impoundments), LAC 33:VII.715.E (Type I and II landfarms), LAC 33:VII.717.I (Type I-A and II-A facilities), LAC 33:VII.721.D (construction and demolition debris and woodwaste landfills), LAC 33:VII.723.D (Type III composting facilities), and LAC 33:VII.725.D (Type III separation facilities).

The Facility Closure/Post-Closure Plan for the facility is provided as Appendix M of this application and addresses the requirements of LAC 33:VII.521.J, LAC 33:VII.711.E, and LAC 33:VII.713.E.

- 1. The closure plan for all facilities must include the following:**

- a. the date of final closure;**

The facility is anticipated to be closed no sooner than 2040.

- b. the method to be used and steps necessary for closing the facility; and**

See the Facility Closure/Post-Closure Plan (Appendix M).

- c. the estimated cost of closure of the facility, based on the cost of hiring a third party to close the facility at the point in the facility's operating life when the extent and manner of its operation would make closure the most expensive.**

See the Facility Closure/Post-Closure Plan (Appendix M).

- 2. The closure plan for Type I and II landfills and surface impoundments must include:**

- a. a description of the final cover and the methods and procedures used to install the cover;**
- b. an estimate of the largest area of the facility ever requiring a final cover at any time during the active life;**
- c. an estimate of the maximum inventory of solid waste ever on-site over the active life of the facility; and**
- d. a schedule for completing all activities necessary for closure.**

See the Facility Closure/Post-Closure Plan (Appendix M).

- 3. The closure plan for all Type I and II facilities and Type III wood waste and construction/demolition debris facilities shall include the following:**

- a. the sequence of final closure of each unit of the facility, as applicable;**

See the Facility Closure/Post-Closure Plan (Appendix M).

- b. a drawing showing final contours of the facility; and

See the Facility Closure/Post-Closure Plan (Appendix M).

- c. a copy of the document that will be filed upon closure of the facility with the official parish recordkeeper indicating the location and use of the property for solid waste disposal, unless the closure plan specifies a clean closure.

A copy of the document that will be filed upon closure of the facility with the official parish recordkeeper indicating the location and use of the property for solid waste disposal, unless the closure plan specifies a clean closure is provided in this application (Appendix M).

- K. **Facility Post-Closure. Standards governing post-closure requirements are contained in LAC 33:VII.711.F (Type I and II landfills), LAC 33:VII.713.F (Type I and II surface impoundments), LAC 33:VII.715.F (Type I and II landfarms), and LAC 33:VII.721.E (Type III construction and demolition debris and woodwaste landfills).**

The Closure/Post-Closure Plan addressing the requirements of LAC 33:VII.521.K, LAC 33:VII.711.F, and LAC 33:VII.713.F for the facilities is included as Appendix M.

- I. **The post-closure plan for all facilities must include the following:**

- a. specification of the long-term use of the facility after closure, as anticipated; and
- b. the cost of conducting post-closure of the facility, based on the estimated cost of hiring a third party to conduct post-closure activities in accordance with the closure plan.

See the Facility Closure/Post-Closure Plan (Appendix M).

- 2. **The post-closure plan for Type I and II facilities must include the following:**

- a. the method for conducting post-closure activities, including a description of the monitoring and maintenance activities and the frequency at which they will be performed;
- b. the method for abandonment of monitoring systems, leachate collection systems, gas-collection systems, etc.;
- c. measures planned to ensure public safety, including access control and gas control; and
- d. a description of the planned uses of the facility during the post-closure period.

See the Facility Closure/Post-Closure Plan (Appendix M).

- L. Financial Responsibility.** Standards governing financial responsibility are contained in LAC 33:VII.727. A section documenting financial responsibility according to LAC 33:VII.727, which contains the following information, must be included for all facilities:
- 1. the name and address of the person who currently owns the land and the name and address of the person who will own the land if the standard permit is granted (if different from the permit holder, provide a copy of the lease or document which evidences the permit holder's authority to occupy the property); or**
 - 2. the name of the agency or other public body that is requesting the standard permit; or, if the agency is a public corporation, its published annual report; or, if otherwise, the names of the principal owners, stockholders, general partners, or officers;**
 - 3. evidence of liability coverage, including:**
 - a. personal injury, employees, and the public (coverage, carriers, and any exclusions or limitations);**
 - b. property damage (coverage and carrier);**
 - c. environmental risks; and**
 - 4. evidence of a financial assurance mechanism for closure and/or post-closure care and corrective action for known releases when needed.**

Cleco currently maintains financial assurance for closure, post-closure, and liability for the existing solid waste facilities at Rodemacher Power Station through the use of the financial test. A copy of Cleco's most current financial test documentation, which is identical to the wording specified in LAC 33:VII.727.A.2.i.iv.(e), is provided in this permit application as Appendix N.

Since Cleco utilizes the financial test, the amount of annual payments is not applicable.

- M. Special Requirements.** The administrative authority may require additional information for special processes or systems and for supplementary environmental analysis.

Cleco will comply with any additional information requests that may be necessary for special processes, systems, or for supplementary environmental analysis. Cleco is prepared to supply the Assistant Secretary with additional information related to the approval of this application.

4.0 LAC 33:VII.523. ADDITIONAL SUPPLEMENTARY INFORMATION

The following supplementary information is required for all solid waste processing and disposal facilities. All responses and exhibits must be identified in the following sequence to facilitate the evaluation:

A. a discussion demonstrating that the potential and real adverse environmental effects of the facility have been avoided to the maximum extent possible;

The information contained in the Part II of the permit application demonstrates that no significant adverse environmental effects will result from the operation of the surface impoundment. This is a result of their locations, the chemical and physical nature of the wastes, and the manner in which the surface impoundment is operated.

As stated in the application, the surface impoundment is located within the confines of the power plant and no sensitive environmental areas exist within 1,000 feet of the impoundment; therefore, the operation of the facility will have no opportunity to adversely impact these sensitive areas.

Utility wastes of the type disposed of in the surface impoundment have been shown to be relatively innocuous. Disposal of utility wastes in surface impoundment has been demonstrated by the industry to be the most reliable and environmentally safe method to use. Groundwater monitoring wells are installed around the impoundment and will detect any pollution of the groundwater caused by disposal in the impoundment. Physical features of the disposal facilities which play a part in environmental protection are drainage control, erosion control and maintenance of dikes.

The surface impoundment is operated by personnel who are skilled in all aspects of power plant systems including disposal in surface impoundments. Inspection of the surface impoundment and the systems associated with them are performed routinely and give forewarning of any problems which might cause adverse environmental impacts.

B. a cost-benefit analysis demonstrating that the social and economic benefits of the facility outweigh the environmental-impact costs;

The socio-economic benefits of the disposal facilities must be considered with those of the entire plant. In order for the power plant to fully provide social and economic benefits it must operate as efficiently and safely as possible. The surface impoundment is a small part of the power plant complex, but it provides the benefits of the proper disposal of wastes from the production of electricity. The disposal of these wastes in an environmentally safe manner at the location where they are generated allows for efficient disposal by operators who are trained in all aspects of power plant operation, thereby contributing to the socio-economic benefits of the entire project.

As mentioned in Section A. above, the adverse environmental impacts of the operation of the surface impoundment are insignificant. This statement is based on the size and location of the impoundment, the nature of the wastes disposed and the manner of their

operation. Given the insignificance of adverse environmental impacts caused by the surface impoundment, their contribution to the socio-economic benefits of the plant mentioned above far outweigh their environmental impact cost.

C. a discussion and description of possible alternative projects which would offer more protection to the environment without unduly curtailing nonenvironmental benefits;

The only alternative to disposing of the wastes which go onto the surface impoundment is to market the waste or transport it to an off-site disposal location.

The wastes which are generated and disposed of in the surface impoundment have no marketable value and cannot be beneficially reused or recycled in the production of electricity.

Alternative disposal methods are not suitable for the disposal of the wastes which are placed in the surface impoundment. Since the wastes are liquid, they are not suitable for incineration. Neither are the liquid wastes suitable for landfill disposal because the standards of operation governing this type of disposal do not apply to liquid wastes. These alternative methods of disposal are not economically feasible and attempts at disposal of liquid wastes using these alternative methods not suited to them could cause environmental damage by releasing contaminants to the air or to the surface or groundwater. The disposal method selected for the disposal of these liquid wastes – i.e., in a surface impoundment, has been demonstrated by the utility industry to be the most reliable, environmentally safe and economically feasible.

D. a discussion of possible alternative sites that would offer more protection to the environment without unduly curtailing nonenvironmental benefits; and

The surface impoundment is located on the power plant site inside the security measures provided for the entire plant. From this perspective the impoundment provides the maximum non-environmental benefits in that they are near the processes that generate the waste and can take full advantage of operating personnel assigned to the plant. An alternative site for disposal would have to be off the power plant site which would require the transport of the waste.

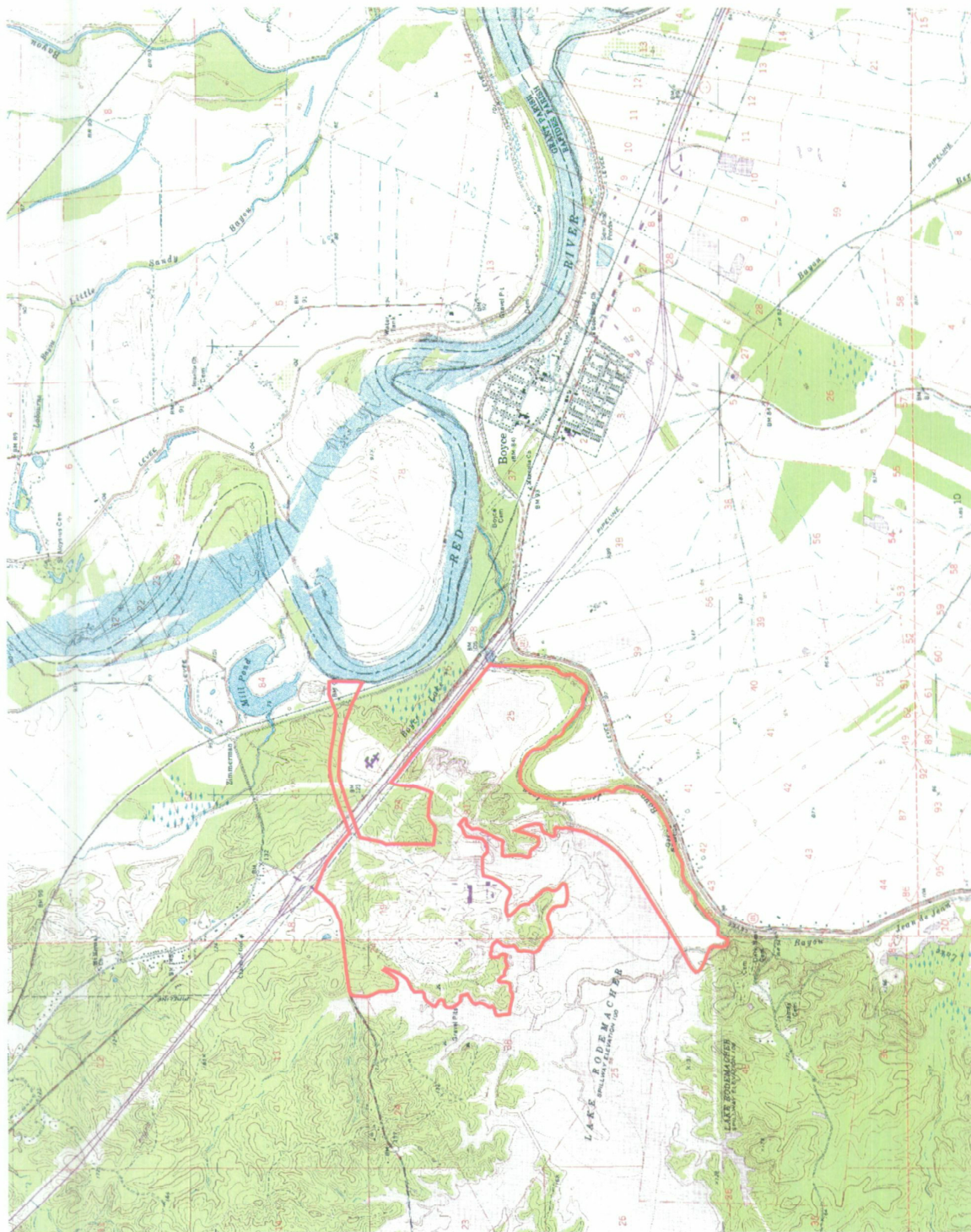
The two means of transporting the waste would be by pipeline or by truck. Either of these methods would increase the potential for environmental damage by spilling from the truck or breaks in the pipeline. Constructing a disposal site apart from the power plant would be quite expensive and would remove the disposal site from the observation of personnel trained in its operation thereby increasing the likelihood of environmental damage should a problem develop at the site. The existing location of the surface impoundment is the most suited to minimizing the costs and adverse environmental impacts. An alternative location for the surface impoundment would increase the risk of damage to the environmental and would reduce non-environmental benefits.

- E. a discussion and description of the mitigating measures which would offer more protection to the environment than the facility, as proposed, without unduly curtailing non-environmental benefits**

Sufficient mitigating measures have been incorporated minimize potential environmental impacts. These measures include:

1. Specific Wastes: The only wastes placed in the facilities are the ones for which it is designated. There is no mixing of wastes placed in the facilities.
2. Site Protection: The dikes and other areas are maintained to prevent erosion or degradation.
3. Groundwater Protection: Groundwater monitoring wells have been constructed and additional ones are proposed to ensure that the wastes being disposed of are not contaminating groundwater.
4. Surface Water Protection Discharges are controlled to meet the criteria of the Louisiana Pollutant Discharge Elimination System Permit for the Plant site. Discharges which meet LPDES criteria do not significantly impact surface waters.

Other mitigating measures which could be applied are inappropriate for this type of waste disposal. These measures include odor control, fugitive dust control, and control of disease vectors. These additional measures would as significant costs to the disposal operation without providing significant protection for the environment.



0 3,000 6,000
SCALE: 1" = 3,000'

Legend:



Secured Property Boundary

CLECO Power LLC
Rodemacher Power Station

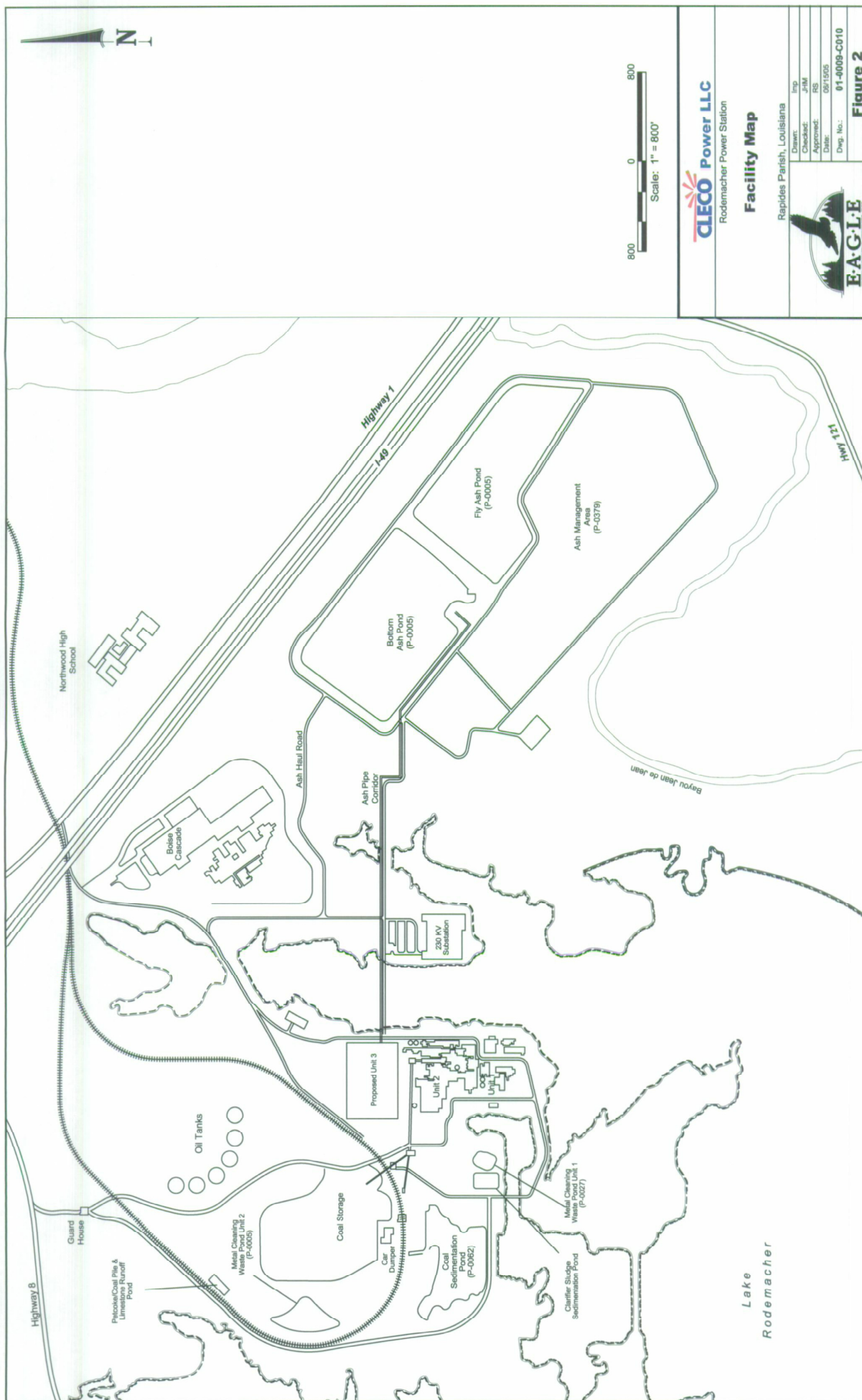
Site Location Map

Rapides Parish, Louisiana



Drawn: jph
Checked: JHM
Approved: RS
Date: 04/19/05
Draw. No.: 01-0009-C007

Figure 1



LECO Power LLC
Rodemacher Power Station

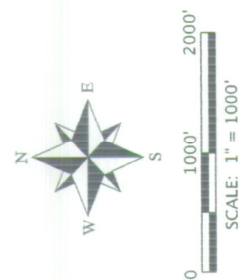
Facility Map

Rapides Parish, Louisiana



Drawn:	Imp
Checked:	JHM
Approved:	RS
Date:	05/15/05
Dwg. No.:	01-4009-C010

Figure 2

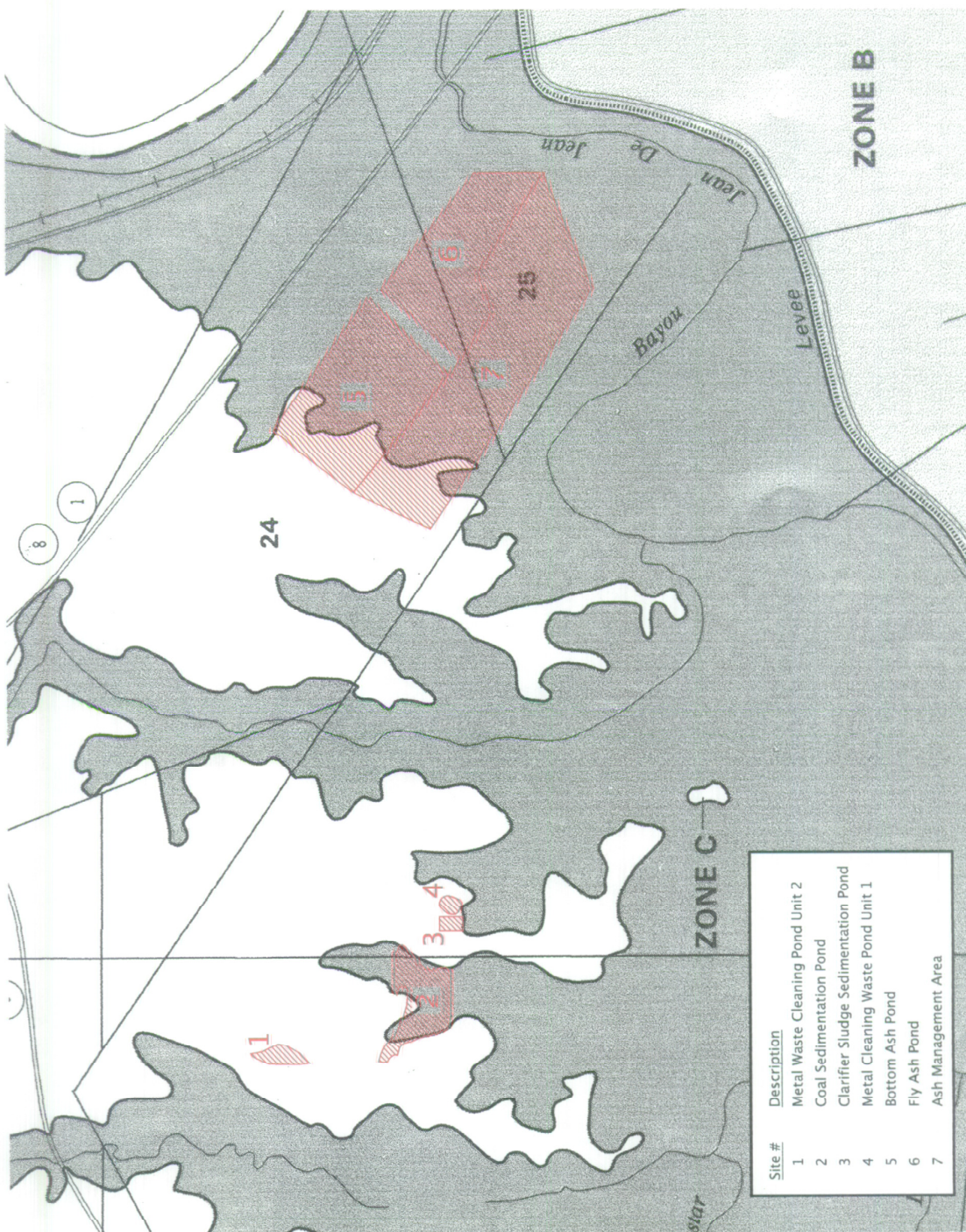


Legend:

-  Flood Zone A - Areas of 100-year flood; base flood elevation and flood hazard factors not determined.
-  Flood Zone C - Areas of minimal flooding.
-  Sites of Interest

Notes:

Base map taken from FEMA Flood Insurance Rate Map, Rapides Parish, Louisiana (Unincorporated Areas), Panel No. 220145 0125 B, dated September 5, 1984.



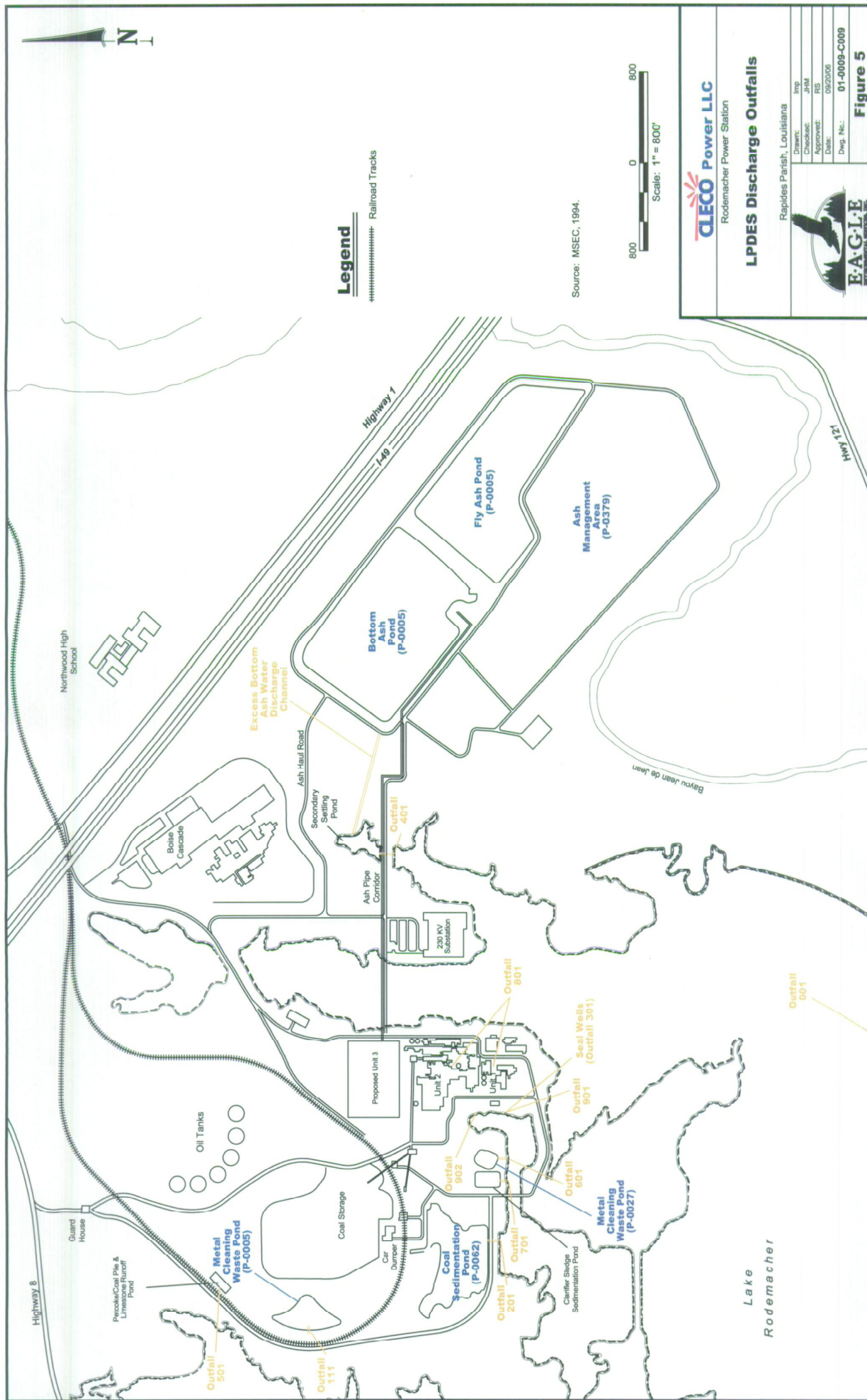
100-Year Flood Map

Rapides Parish, Louisiana



Figure 3

Drawn: JRM
Checked: JRM
Approved: JRM
Date: 04/18/08
Proj. No.: 01-0009-C008





0 3,000 6,000
SCALE: 1" = 3,000'

CLECO Power LLC
Rodemacher Power Station

2004 Aerial Photograph

Rapides Parish, Louisiana

Drawn: jsh

Checked: JHM

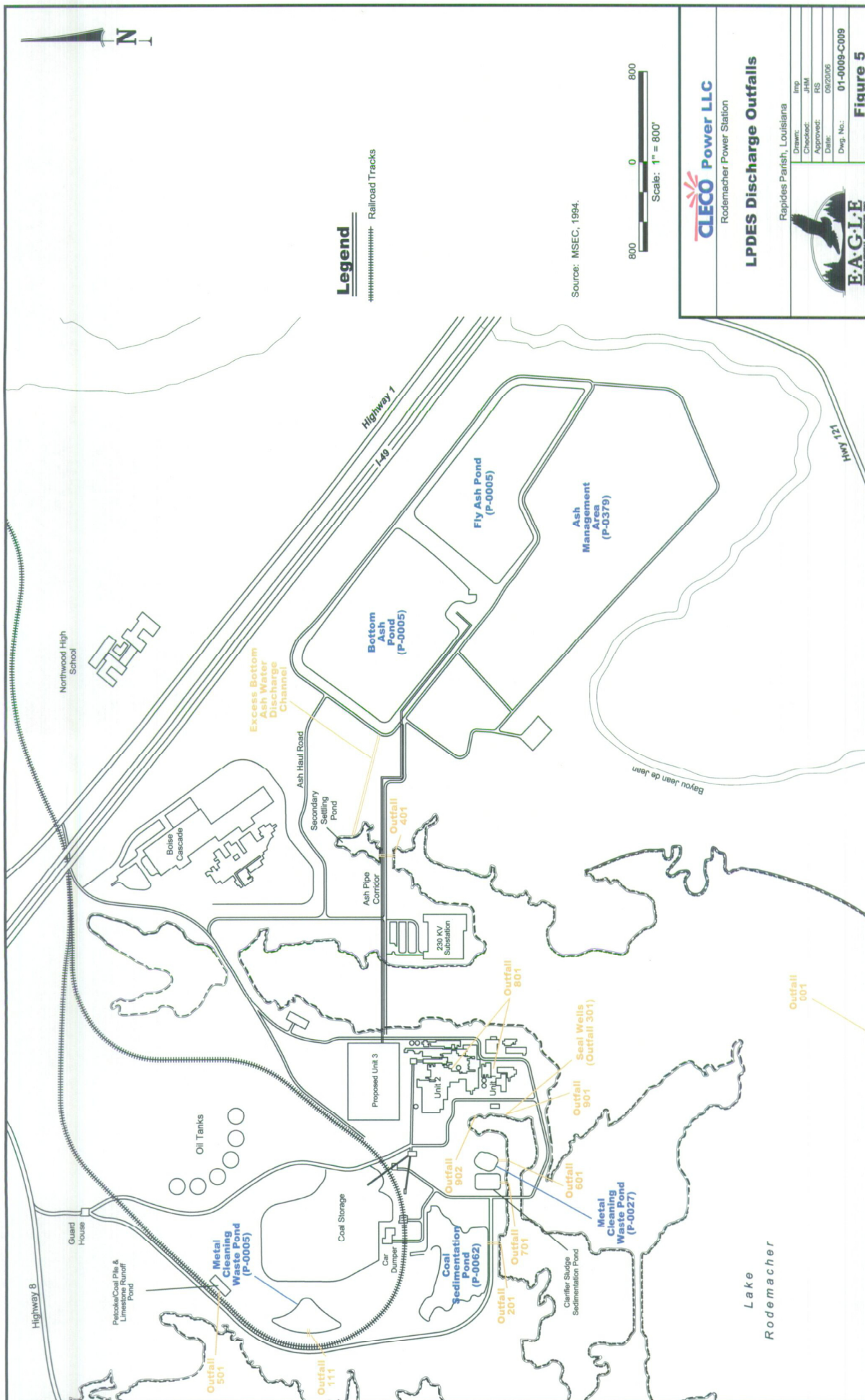
Approved: RS

Date: 04/18/05

Dwg. No.: 01-0009-C011

Figure 4





APPENDIX A

CORRESPONDENCE



DEPARTMENT OF THE ARMY

VICKSBURG DISTRICT, CORPS OF ENGINEERS

4155 CLAY STREET

VICKSBURG, MISSISSIPPI 39183-3435

REPLY TO
ATTENTION OF:

May 27, 2005

Operations Division
Regulatory

SUBJECT: Determination of Permit Requirements - Existing
91.41- Acre Ash Containment Area, Central Louisiana Electric
Company, Rodemacher Power Station Facility, Boyce, Rapides
Parish, Louisiana

Mr. Chris M. Chambers
Shaw Environmental, Incorporated
4171 Essen Lane
Baton Rouge, Louisiana 70809

Dear Mr. Chambers:

I refer to your letter requesting a determination of permit requirements regarding the continuation of wasting operations at an existing 91.41-acre ash containment site that is part of Central Louisiana Electric Company's Rodemacher power station facility near Boyce, Louisiana. The site is located in Sections 24, 25, 78, 80, and 81, T5N-R3W, Rapides Parish, Louisiana. The location of the activity is depicted on the enclosed map (enclosure 1).

Based upon the information provided, including original permit documentation from the New Orleans District, we have determined that no further regulatory action is needed for the activities authorized by permit number LMNOD-SP (Bayou Jean de Jean) 1 dated March 29, 1977. Specifically, the permit authorizes the installation and maintenance of a fill and levee ash containment system.

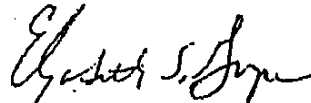
However, please be advised that any additional or future work in potential jurisdictional waters of the United States, including wetlands, outside the limits of the project boundary identified on enclosure 1 should be referred to this office for a determination of permit requirements prior to beginning work.

-2-

This determination of Department of the Army regulatory requirements does not convey any property rights, either in real estate or material or any exclusive privileges, and does not authorize any injury to property or invasion of rights or local laws or regulations, or obviate the requirement to obtain State or local assent required by law for the activity discussed herein.

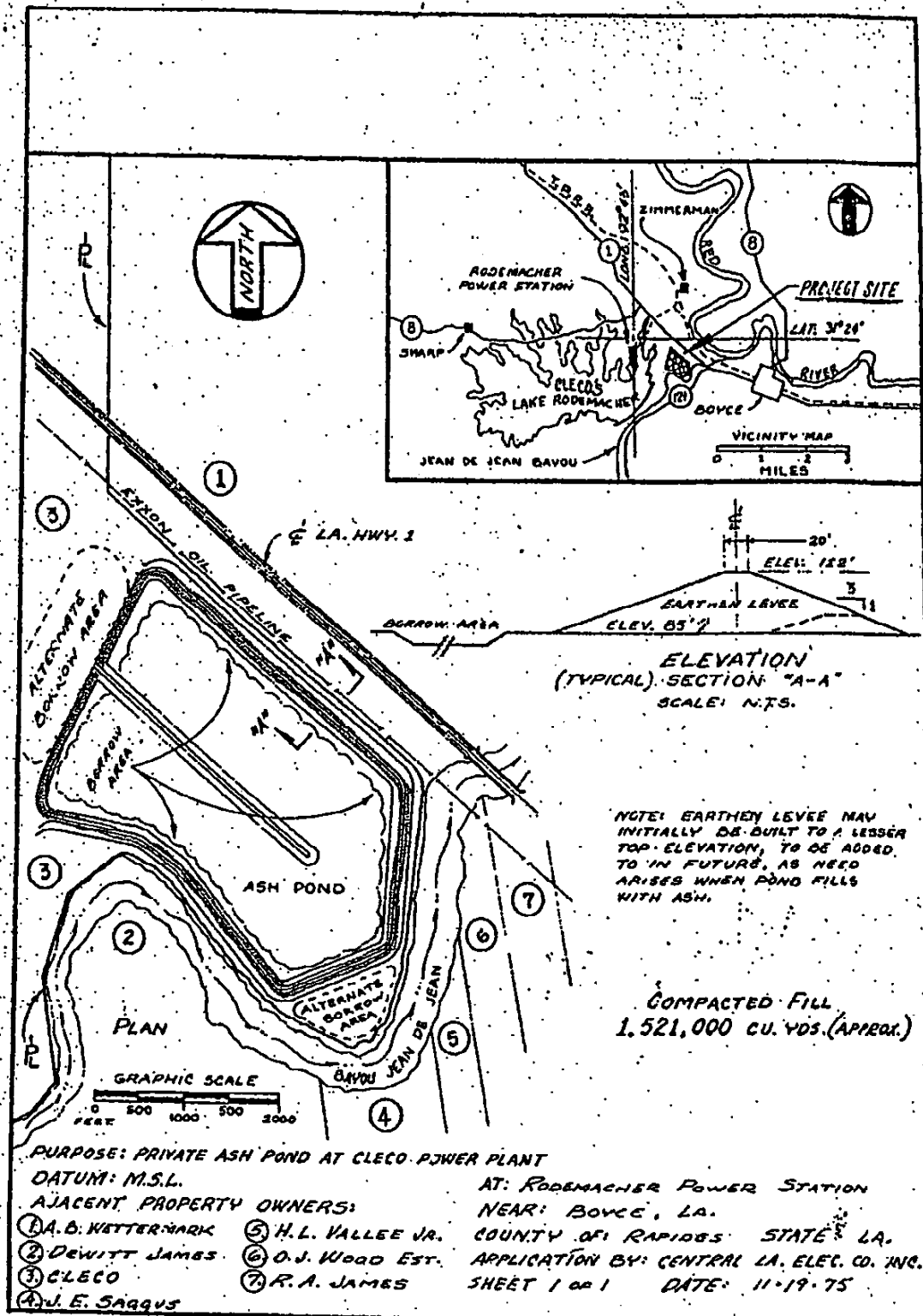
If we may be of any further assistance in this matter, please contact Mr. Robert Ulmer, telephone (601) 631-5637, fax (601) 631-5459 or e-mail address: regulatory@mvk02.usace.army.mil.

Sincerely,



Elizabeth S. Guynes
Chief, Regulatory Branch

Enclosure



Project Boundary (Levee)

4.6.11

encl (1)

Exhibit E

**Resource Agency Correspondence
United States Fish and Wildlife Service,
Louisiana Department of Wildlife and Fisheries,
Louisiana State Historic Preservation Office**



United States Department of the Interior

FISH AND WILDLIFE SERVICE

646 Cajundome Blvd.
Suite 400
Lafayette, Louisiana 70506

July 13, 2004

Mr. Chris M. Chambers
Shaw Environmental, Inc.
4171 Essen Lane
Baton Rouge, Louisiana 70809

Dear Mr. Chambers:

Please reference your, June 14, 2004, letter, on behalf of Cleco Power L.L.C., requesting our review of a proposed re-powering project at their Rodemacher Power Station in Boyce, Rapides Parish, Louisiana. The U.S. Fish and Wildlife Service has reviewed the information you provided, and offers the following comments in accordance with the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

The proposed project is located within areas that may be inhabited by the red-cockaded woodpecker (RCW, *Picoides borealis*), Federally listed as an endangered species. Your preliminary project description, however, did not specify whether the proposed activities would require clearing of pine trees. If the proposed activities would not require such clearing, then no further consultation with this office will be necessary. If pine trees would be cleared, however, the guidance below should be carefully followed.

RCWs nest in open, park-like stands of mature (i.e., greater than 60 years of age) pine trees containing little hardwood understory or midstory. RCWs can tolerate small numbers of overstory hardwoods or large midstory hardwoods at low densities found naturally in many southern pine forests, but they are not tolerant of dense hardwood midstories resulting from fire suppression. RCWs excavate roost and nest cavities in large living pines (i.e., 10 inches or greater in diameter at breast height). The cavity trees and the foraging area within 200 feet of those trees are known as a cluster. Foraging habitat is defined as pine and pine-hardwood (i.e., 50 percent or more of the dominant trees are pines) stands over 30 years of age that are located contiguous to and within one-half mile of the cluster.

If the proposed project area does not contain suitable nesting and/or foraging habitat as defined above, further consultation with the Service for this project will not be necessary. If suitable nesting and/or foraging habitat does exist, however, all suitable nesting habitat within a one-half mile radius from the project boundary should be carefully surveyed by a qualified biologist for the presence of RCW clusters in accordance with the RCW Recovery Plan (2003) survey protocol. We recommend that you provide this office with a copy of the survey report, which

should include the following details:

1. survey methodology including dates, qualifications of personnel, size of survey area, and transect density;
2. pine stand characteristics including number of acres of suitable nesting and/or foraging habitat, tree species, basal area and number of pine stems 10 inches or greater per acre, percent cover of pine trees greater than 60 years of age, species of dominant vegetation within each canopy layer, understory conditions and species composition (several representative photographs should be included);
3. number of active and inactive RCW cavity trees observed and the condition of the cavities (e.g., resin flow, shape of cavity, start-holes);
4. presence or absence of RCWs; and
5. topographic quadrangle maps which illustrate areas of adequate RCW nesting and/or foraging habitat, cluster sites, and cavity tree locations relative to proposed construction activities.

If no RCW clusters are found within a one-half mile radius of the project boundary, a request for our concurrence with your "not likely to adversely affect" determination, as well as the basis for your determination, should be included with the survey report. If we concur with that determination, no further consultation with this office will be necessary. If RCW clusters are found in the surveyed areas, however, then further consultation with this office will be required.

The proposed project may impact wetlands. For a complete jurisdictional wetland delineation of the proposed project, please contact Mr. Ken Moseley (601/631-5289) at the Vicksburg District Corps of Engineers (Corps). If the Corps determines that the proposed project is within their regulatory jurisdiction, official U.S. Fish and Wildlife Service comments will be provided in response to the corresponding Public Notice.

We appreciate the opportunity to provide comments in the planning stages of this proposed activity. If you need further assistance, please contact Angela Culpepper (337/291-3137) of this office.

Sincerely,



Russell C. Watson

Supervisor

Louisiana Field Office

cc: Corps of Engineers, Vicksburg, MS
LDWF, Natural Heritage Program, Baton Rouge, LA

State of Louisiana



RECEIVED JUL 21 2004

Dwight Landreneau
Secretary

Department of Wildlife & Fisheries
Post Office Box 98000
Baton Rouge, LA 70898-9000
(225) 765-2800

Kathleen Babineaux Blanco
Governor

Name Chris M. Chambers
Company Shaw Environmental, Inc.
Street Address 4171 Essen Lane
City, State, Zip Baton Rouge, LA 70809
Project Cleco Power, LLC - Repowering Project
Rodemacher Power Station Unit No. 1
Boyce, Rapides Parish, LA
Date July 16, 2004
Invoice Number 04071605

Personnel of the Habitat Section of the Fur and Refuge Division have reviewed the preliminary data for the captioned project. Our database indicates a 1994 observation of a waterbird nesting colony in the surrounding area of your project. Rookeries can move from year to year and no current information is available on the status of these rookeries. No activity is permitted within 300 meters around rookeries during the breeding season which is generally March 15-July 15. We recommend that a qualified biologist inspect the proposed work site for the presence of nesting colonies during the nesting season. To minimize disturbance to colonial nesting birds, the following restrictions on activity should be observed:

- For colonies containing nesting wading birds (i.e., herons, egrets, night-herons, ibis, and roseate spoonbills, anhingas, and/or cormorants), all activity occurring within 1,000 feet of a rookery should be restricted to the non-nesting period (i.e., September 1 through February 15, depending on species present).
- For colonies containing nesting gulls, terns, and/or black skimmers, all activity occurring within 650 feet of a rookery should be restricted to the non-nesting period (i.e., September 16 through April 1, depending on species present).

We recommend that on-site contract personnel be informed of the need to identify colonial nesting birds and their nests, and should avoid affecting them during the breeding season. If you have any questions please call LNHP Zoologist Ines Maxit at 225-765-2820.

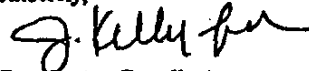
Our database also indicates a 1995 observation of osprey (*Pandion haliaetus*) in the area of your project. While no legal protection is afforded this species, it does hold a state rank of S2B/S3N and is considered imperiled /rare in Louisiana. Ospreys are found in central and southeastern Louisiana. The Osprey is rarely seen far from water, except during migration. It eats primarily fish, with occasional snakes, amphibians, and some smaller vertebrates. The breeding season begins in November and extends through early July. Ospreys typically build large stick nests both on living and dead trees, but also will use numerous man-made structures including telephone poles, wharf pilings, windmills, microwave towers, chimneys, and channel markers. Nests are often used in successive years. Clutch size is 1-4 (most often 3). Incubation lasts 4.5-5.5 weeks, usually mainly by female. Young first fly at 44-59 days, dependent on

parents for up to 6 weeks or more (less in north). First breeds usually at 3 years, sometimes at 4-5 years. Large numbers may nest in a relatively small area when food resources are adequate and nesting sites are plentiful. Osprey populations were declining rapidly in the mid-1900's, most likely due to the use of DDT and other pesticides. The accumulation of pesticides caused reproductive failures. With the banning of DDT and conservation programs (particularly, creating nesting platforms) for this species, Osprey populations are starting to increase. We anticipate no negative impacts on this species from your project.

In reviewing our database, no other rare, threatened, or endangered species or critical habitats were found within the areas of the captioned project that lie in Louisiana. No state or federal parks, wildlife refuges, scenic streams, or wildlife management areas are known at the specified sites within Louisiana's boundaries.

The Louisiana Natural Heritage Program has compiled data on rare, endangered, or otherwise significant plant and animal species, plant communities, and other natural features throughout the state of Louisiana. Heritage reports summarize the existing information known at the time of the request regarding the location in question. The quantity and quality of data collected by the LNHP are dependent on the research and observations of many individuals. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Louisiana have not been surveyed. This report does not address the occurrence of wetlands at the site in question. Heritage reports should not be considered final statements on the biological elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. The Louisiana Natural Heritage Program requires that this office be acknowledged in all reports as the source of all data provided here. If you have any questions or need additional information, please call Louisiana Natural Heritage Program Data Manager Jill Kelly at (225) 765-2643.

Sincerely,



Gary Lester, Coordinator
Natural Heritage Program

EXPLANATION OF RANKING CATEGORIES EMPLOYED BY NATURAL HERITAGE PROGRAMS NATIONWIDE

Each element is assigned a single global rank as well as a state rank for each state in which it occurs. Global ranking is done under the guidance of NatureServe, Arlington, VA. State ranks are assigned by each state's Natural Heritage Program, thus a rank for a particular element may vary considerably from state to state. Federal ranks are designated by the U.S. Fish & Wildlife Service under the provisions of the Endangered Species Act of 1973.

FEDERAL RANKS (USFWS FIELD):

LE = Listed Endangered

LT = Listed Threatened

PE = Proposed endangered

PT = Proposed Threatened

C = Candidate

PDL = Proposed for delisting

E (S/A) or T (S/A) = Listed endangered or threatened because of similarity of appearance

XE = Essential experimental population

XN = Nonessential experimental population

No Rank = Usually indicates that the taxon does not have any federal status. However, because of potential lag time between publication in the Federal Register and entry in the central databases and state databases, some taxa may have a status which does not yet appear.

(Rank, Rank) = Combination values in parenthesis = The taxon itself is not named in the Federal Register as having U.S. ESA status; however, all of its infraspecific taxa (worldwide) do have official status. The statuses shown in parentheses indicate the statuses that apply to infraspecific taxa or populations within this taxon. *THE SPECIES IS CONSIDERED TO HAVE A COMBINATION STATUS IN LOUISIANA*

(PS) = partial status = Status in only a portion of the species' range. Typically indicated in a "full" species record where an infraspecific taxon or population has U.S. ESA status, but the entire species does not. *THE SPECIES DOES NOT HAVE A STATUS IN LOUISIANA*

(PS, Rank) = partial status = Status in only a portion of the species' range. The value of that status appears because the entity with status does not have an individual entry in NatureServe. *THE SPECIES MAY HAVE A STATUS IN LOUISIANA*

GLOBAL ELEMENT RANKS:

G1 = critically imperiled globally because of extreme rarity (5 or fewer known extant populations) or because of some factor(s) making it especially vulnerable to extinction

G2 = imperiled globally because of rarity (6 to 20 known extant populations) or because of some factor(s) making it very vulnerable to extinction throughout its range

G3 = either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g., a single physiographic region) or because of other factors making it vulnerable to extinction throughout its range (21 to 100 known extant populations)

G4 = apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery (100 to 1000 known extant populations)

STATE ELEMENT RANKS:

G5 = demonstrably secure globally, although it may be quite rare in parts of its range, especially at the periphery (1000+ known extant populations)

GH = of historical occurrence throughout its range; i.e., formerly part of the established biota, with the possibility that it may be rediscovered (e.g., Bachman's Warbler)

GU = possibly in peril range-wide, but status uncertain; need more information

G7 = rank uncertain. Or a range (e.g., G3G5) delineates the limits of uncertainty

GQ = uncertain taxonomic status

GX = believed to be extant throughout its range (e.g., Passenger Pigeon) with virtually no likelihood that it will be rediscovered

T = subspecies or variety rank (e.g., G5T4 applies to a subspecies with a global species rank of G5, but with a subspecies rank of G4)

STATE ELEMENT RANKS:

S1 = critically imperiled in Louisiana because of extreme rarity (5 or fewer known extant populations) or because of some factor(s) making it especially vulnerable to extirpation

S2 = imperiled in Louisiana because of rarity (6 to 20 known extant populations) or because of some factor(s) making it very vulnerable to extirpation

S3 = rare and local throughout the state or found locally (even abundantly at some of its locations) in a restricted region of the state, or because of other factors making it vulnerable to extirpation (21 to 100 known extant populations)

S4 = apparently secure in Louisiana with many occurrences (100 to 1000 known extant populations)

S5 = demonstrably secure in Louisiana (1000+ known extant populations)

(B or N) may be used as qualifier of numeric ranks and indicating whether the occurrence is breeding or nonbreeding

SA = accidental in Louisiana, including species (usually birds or butterflies) recorded once or twice or only at great intervals hundreds or even thousands of miles outside their usual range

SH = of historical occurrence in Louisiana, but no recent records verified within the last 20 years, formerly part of the established biota, possibly still persisting

SR = reported from Louisiana, but without conclusive evidence to accept or reject the report

SU = possibly in peril in Louisiana, but status uncertain; need more information

SK = believed to be extirpated from Louisiana

SZ = transient species in which no specific consistent area of occurrence is identifiable



MITCHELL J. LANDRIEU
LIEUTENANT GOVERNOR

State of Louisiana
OFFICE OF THE LIEUTENANT GOVERNOR
DEPARTMENT OF CULTURE, RECREATION & TOURISM
OFFICE OF CULTURAL DEVELOPMENT
DIVISION OF ARCHAEOLOGY

ANGÈLE DAVIS
SECRETARY

PAM BREAU
ASSISTANT SECRETARY

August 18, 2004

REC'D AUG 31 2004

Mr. Chris Chambers
Shaw Environmental, Inc.
4171 Essen Lane
Baton Rouge, LA 70809

Re: Cleco Power LLC, Rodemacher Power Station
Unit Number 1 Repowering Project
Boyce, Rapides Parish, Louisiana

Dear Mr. Chambers:

This is in response to your letter dated June 14, 2004, concerning the above-referenced project. There are several recorded archaeological sites located within the Area of Potential Effects (APE) of this proposed project. No ground disturbance should be done within the boundaries of these sites (see enclosed maps and site forms). If these sites can be avoided, we have no objections to implementation of this project.

Should you have any questions concerning our comments, please contact Rachel Watson in the Division of Archaeology at (225) 342-8170.

Sincerely,

A handwritten signature in cursive script that reads "Pam Breau".

Pam Breau
State Historic Preservation Officer

PB:RW:s

Encl: as stated

STATE OF LOUISIANA
SITE RECORD FORM

Site Name: State Survey No: 16RA113
Other Site Designation: Parish: Rapides
Instructions for Reaching Site:
Go N on LA 1, 1.5 Mi from junction of LA 121. Site is on W side of LA 1, appx. 200m from road on a small ridge
USGS Quad (Name, date, series): Boyce (1956) 15'
Quad No: 27-F quarter of the quarter of Section 24 Township 5N Range: 3W
UTM Coordinates: Zone: 15 Easting: Northing:
Geographical Coordinates: Latitude: Longitude:

PHYSICAL SETTING

Land Form: Ridge Slope:
Geologic Processes: Coastal plain Elev. ft AMSL:
Site Position: Overlooks cypress swamp
Near Water: Cypress swamp Flooding:
Soil Characteristics: Grey sand (cont)
Floral Communities: Mixed pine and hardwoods
Faunal Communities:
Other Potential Resources:
Nearest Known Site:

SITE DESCRIPTION

Site Size: Plan:
Orientation: E - W trending Stratigraphy:
Artifact Density: Artifact Distribution:
Cultural Features:
Prehistoric scatter to a depth of 25cm
Cultural Affiliation:
Neo-Indian (unknown)
Presumed Function: Camp

COLLECTIONS

Survey Meth: Subsurface testing
Assessment of Collecting Conditions:
Description of Material:
Prehistoric ceramics, chipped stone

CONDITIONS

Present Use:
Erosion or Disturbance: Surface disturbed by logging activity
Probable Future Destruction:

STATE OF LOUISIANA

CONTINUATION FORM

Site Name:

Site No: 16RA113

Soil Characteristics

overlain by 3 cm of humus and underlain by red clay

SITE EVALUATION

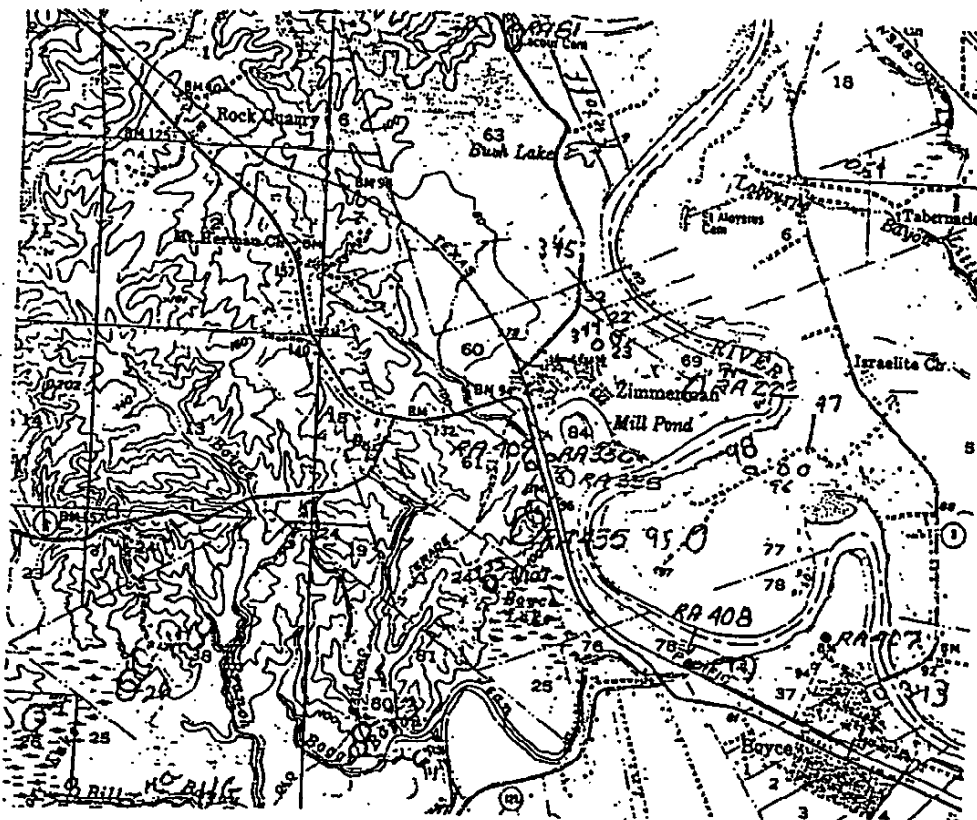
Site Number: 16RA113

Research Potential:

State/National Register Eligibility: Unknown

Recommendations:

QUAD MAP OF SITE AREA



RECORDS

Owner and Address:

CLECO

Tenant and Address:

Informants:

Prev. Invest:

Previous Collections and Availability:

References: Heartfield, et al (1978)

Photos and Maps:

Remarks:

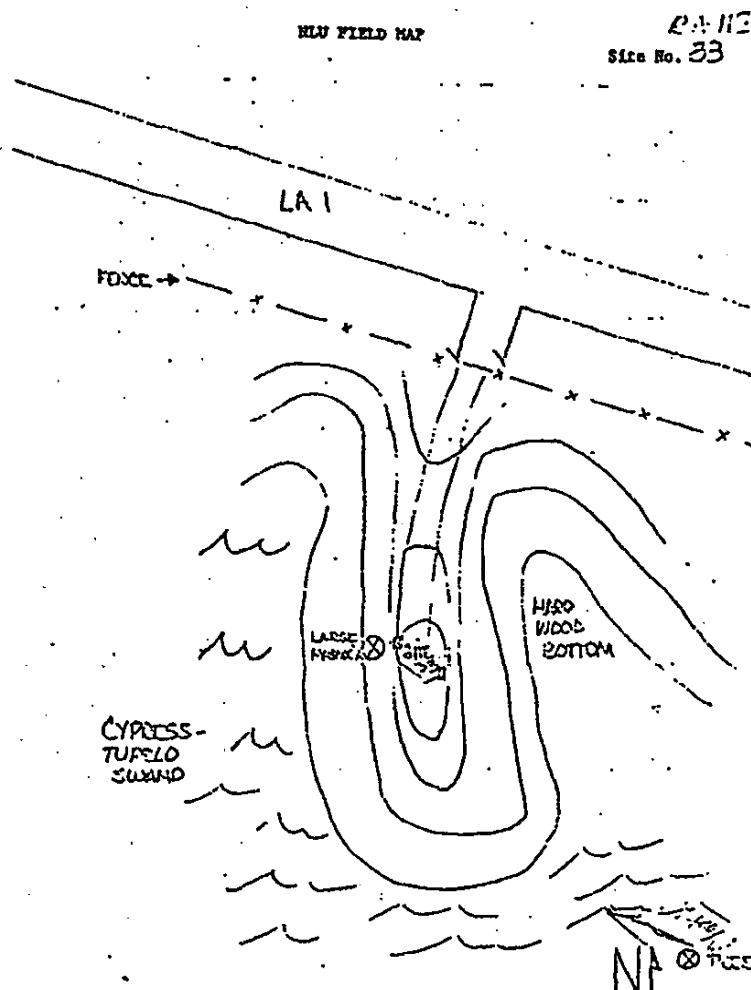
Recorder: Spencer, et al

Date: 3/10/77

STATE OF LOUISIANA
SITE SKETCH MAP FORM

Site Name:

Site No: 16RA113



Scale: 1 cm = 10 meters (Don't forget to mark Cardinal Directions) ☒ TRUE
 Recorded by: ASREEN/CANONICO
 Date: 10 MARCH 1977

Scale: 1 cm = 10 meters
 Drawn By: Asreen/Canonico
 Date: 3/10/77

STATE OF LOUISIANA

REFERENCE FORM

Site Name:

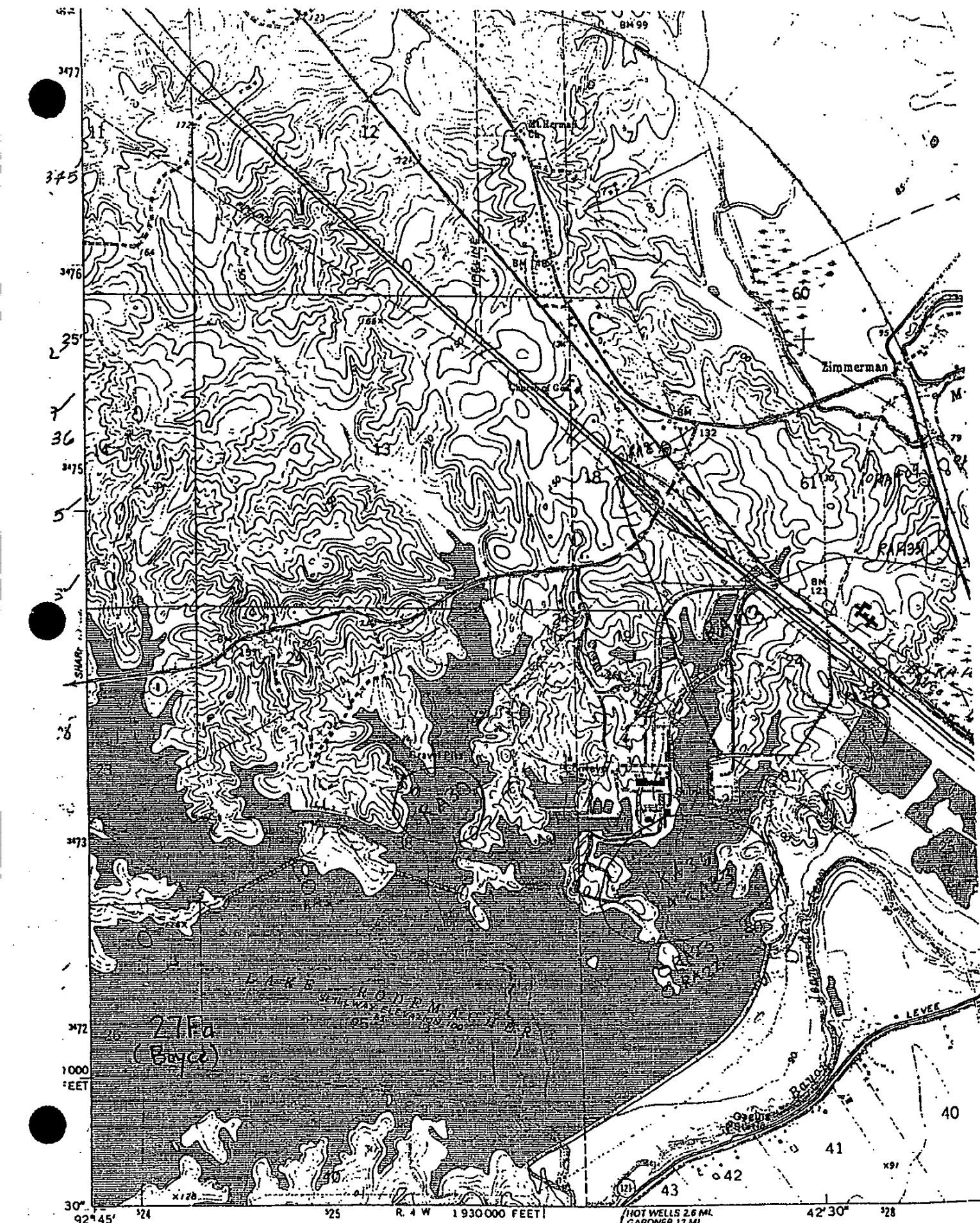
Site No: 16RA113

22-478

Heartfield, L., K. Hudson, G. R. Dennis Price,
S. Mitcham, H. E. Jackson, and G. S. Greene

1978

A cultural resource survey and evaluation
of the Opelousas to Shreveport portion
on the proposed North-South Expressway:
Phases I and II. 3 vol. Caddo, St. Landry,
Rapides, Evangeline, Avoyelles, Natchitoches,
DeSoto and Red River Parishes, Louisiana.
Unpublished report on file with the Division
of Archaeology and Historic Preservation,
Baton Rouge, LA



Mapped, edited, and published by the Geological Survey

STATE OF LOUISIANA
SITE RECORD FORM

Site Name:
Other Site Designation:
Instructions for Reaching Site:

State Survey No: 16RA30
Parish: Rapides

USGS Quad (Name, date, series): Boyce (1956) 15'
Quad No: 27-F quarter of the quarter of Section 38 Township 5N Range: 4W
UTM Coordinates: Zone: 15 Easting: Northing:
Geographical Coordinates: Latitude: Longitude:

PHYSICAL SETTING

Land Form: Bench Slope:
Geologic Processes: Coastal plain Elev. ft AMSL: 90
Site Position: On small terrace between ridge and bottom, at foot of ridge
Near Water: Flooding:
Soil Characteristics: Susquehanna
Floral Communities:
Faunal Communities:
Other Potential Resources:
Nearest Known Site:

SITE DESCRIPTION

Site Size: 100' diameter Plan:
Orientation: Stratigraphy:
Artifact Density: Artifact Distribution: Scattered in spoil
Cultural Features:
 Prehistoric scatter in spoil dirt piles west of site
Cultural Affiliation:
 Meso-Indian/Archaic; Neo-Indian (unknown)
Presumed Function: Camp

COLLECTIONS

Survey Meth: Grab surface collection
Assessment of Collecting Conditions:
Description of Material:
 Several plain clay-tempered sherds, 1 Gary base, chips, flakes, cores (very abundant),
 1 Incised clay-tempered sherd

CONDITIONS

Present Use:
Erosion or Disturbance: Innundation
Probable Future Destruction:

SITE EVALUATION

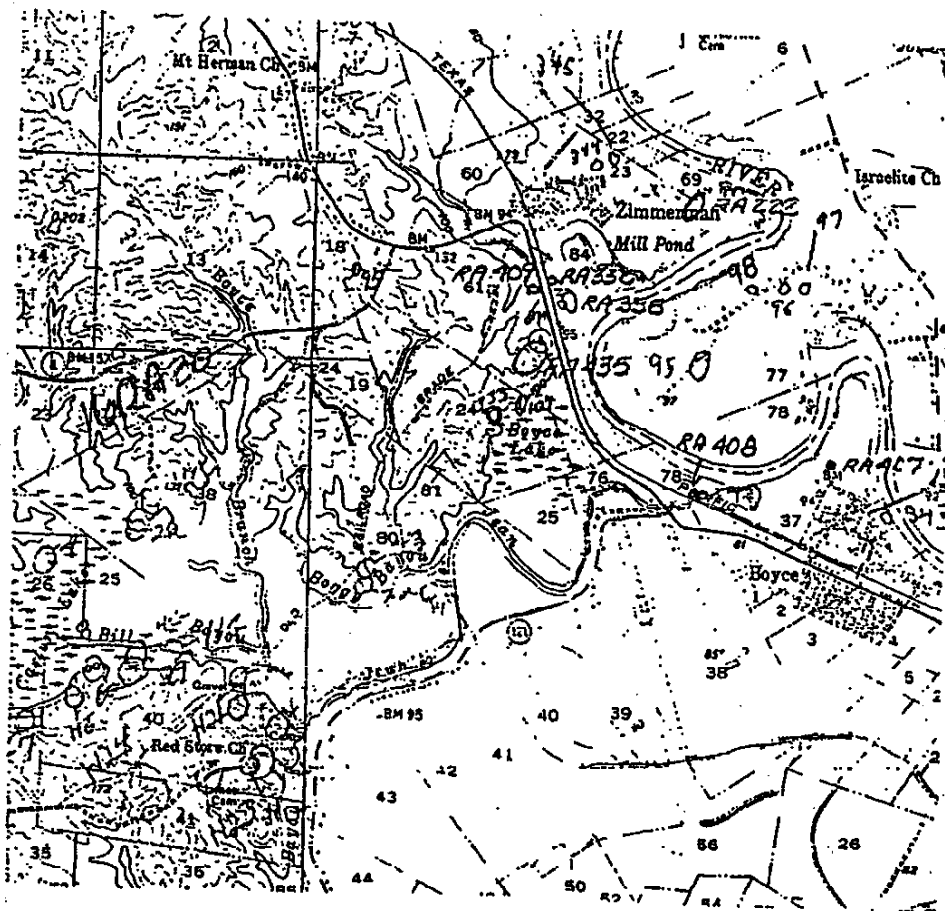
Site Number: 16RA30

Research Potential:

State/National Register Eligibility: Unknown

Recommendations:

QUAD MAP OF SITE AREA



RECORDS

Owner and Address:

Tenant and Address:

Informants:

Prev. Invest:

Previous Collections and Availability:

References: House, John (1973); HPG, Inc. (1981)

Photos and Maps:

Remarks:

Recorder: John House

Date: 1972

STATE OF LOUISIANA

REFERENCE FORM

Site Name:

Site No: 16RA30

22-321

House, John H.

1972. Archaeological salvage in the basin of
Lake Rodemacher, Rapides Parish, Louisiana.
Unpublished report on file at the Division
of Archaeology and Historic Preservation,
Department of Culture, Recreation and
Tourism, Baton Rouge, LA

22-687

Heartfield, Price and Greene, Inc.

1981 "Prehistoric Inventory for the Energy
Transportation Systems, Inc. Project."
Prepared for Energy Transportation
Systems, Inc.

STATE OF LOUISIANA
SITE RECORD FORM

Site Name:
Other Site Designation:
Instructions for Reaching Site:

State Survey No: 16RA33
Parish: Rapides

USGS Quad (Name, date, series): Boyce (1956) 15'
Quad No: 27-F quarter of the quarter of Section 80 Township 5N Range: 3W
UTM Coordinates: Zone: 15 Easting: Northing:
Geographical Coordinates: Latitude: Longitude:

PHYSICAL SETTING

Land Form: Knoll Slope:
Geologic Processes: Coastal plain Elev. ft AMSL:
Site Position: On high knoll, material concentrated on the crest of the ridge
Near Water: Flooding:
Soil Characteristics: Susquehanna
Floral Communities:
Faunal Communities:
Other Potential Resources:
Nearest Known Site:

SITE DESCRIPTION

Site Size: 100' x 300' Plan:
Orientation: Stratigraphy:
Artifact Density: Sparse Artifact Distribution: On ridge crest
Cultural Features:
 Prehistoric lithic scatter concentrated on the crest of the ridge
Cultural Affiliation:
 Neo-Indian (unknown)
Presumed Function: Camp

COLLECTIONS

Survey Meth: Grab surface collection
Assessment of Collecting Conditions:
Description of Material:
 1 incised sherd, 1 ovate biface, core chips

CONDITIONS

Present Use:
Erosion or Disturbance: Subject to wave action, eroding
Probable Future Destruction:

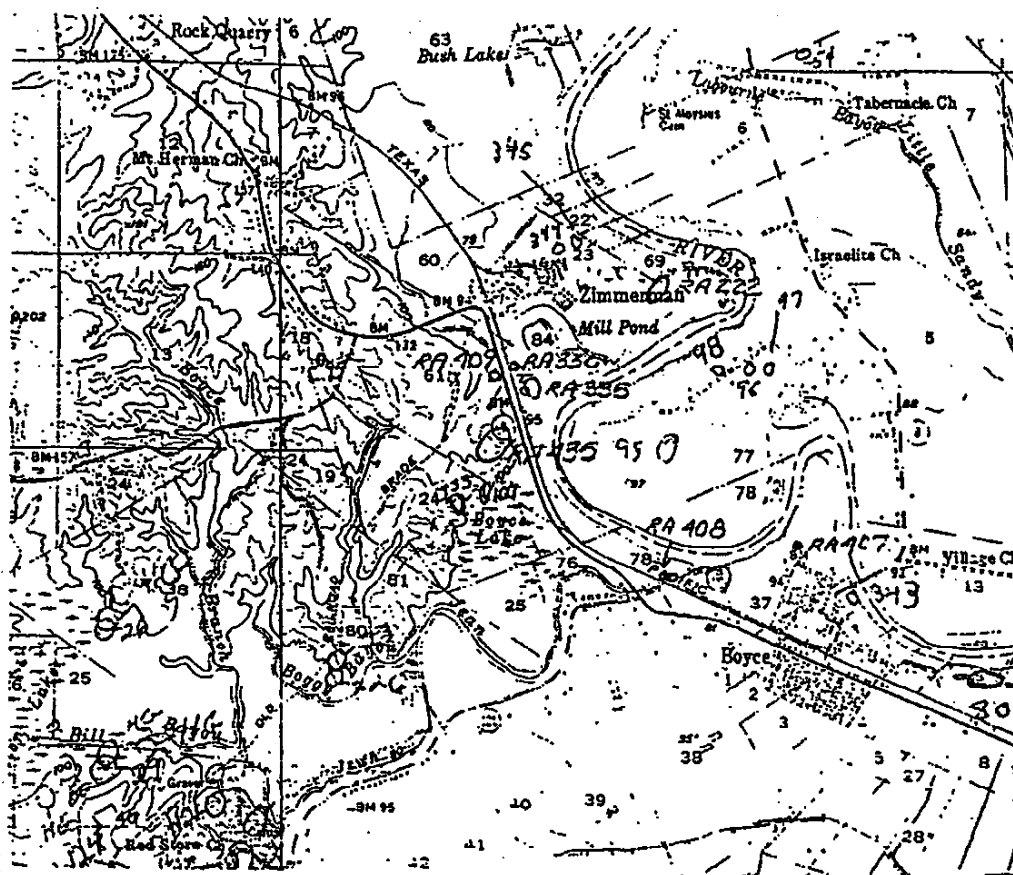
SITE EVALUATION

Site Number: 16RA33

Research Potential:

State/National Register Eligibility: Unknown
Recommendations: None

QUAD MAP OF SITE AREA



RECORDS

Owner and Address:

Tenant and Address:

Informants:

Prev. Invest:

Previous Collections and Availability:

References: House, John (1973); HPG, Inc. (1981)

Photos and Maps:

Remarks:

Recorder: House

Date: 1972

STATE OF LOUISIANA

REFERENCE FORM

Site Name:

Site No: 16RA33

22-321

House, John H.

1972

Archaeological salvage in the basin of Lake Rodemacher, Rapides Parish, Louisiana. Unpublished report on file at the Division of Archaeology and Historic Preservation, Department of Culture, Recreation and Tourism, Baton Rouge, LA

22-687

Heartfield, Price and Greene, Inc.

1981

"Prehistoric Inventory for the Energy Transportation Systems, Inc. Project." Prepared for Energy Transportation Systems, Inc.

STATE OF LOUISIANA
SITE RECORD FORM

Site Name: State Survey No: 16RA36
Other Site Designation: Parish: Rapides
Instructions for Reaching Site:
At N end of dam at Lake Rodemacher
USGS Quad (Name, date, series): Boyce (1956) 15'
Quad No: 27-F quarter of the quarter of Section 80 Township 5N Range: 3W
UTM Coordinates: Zone: 15 Easting: Northing:
Geographical Coordinates: Latitude: Longitude:

PHYSICAL SETTING

Land Form: Knoll Slope:
Geologic Processes: Coastal plain Elev. ft AMSL:
Site Position: On S tip of hill at N end of the dam at Lake Rodemacher
Near Water: Lake Rodemacher Flooding:
Soil Characteristics: Susquehanna
Floral Communities:
Faunal Communities:
Other Potential Resources:
Nearest Known Site:

SITE DESCRIPTION

Site Size: Plan:
Orientation: Stratigraphy:
Artifact Density: Artifact Distribution: On S tip of hill
Cultural Features:
Prehistoric scatter
Cultural Affiliation:
Neo-Indian (unknown)
Presumed Function: Prehistoric (unknown)

COLLECTIONS

Survey Meth: Grab surface collection
Assessment of Collecting Conditions:
Description of Material:
1 sherds and small amount of lithic material. Local collectors reportedly have
projectile points

CONDITIONS

Present Use:
Erosion or Disturbance: Unknown
Probable Future Destruction:

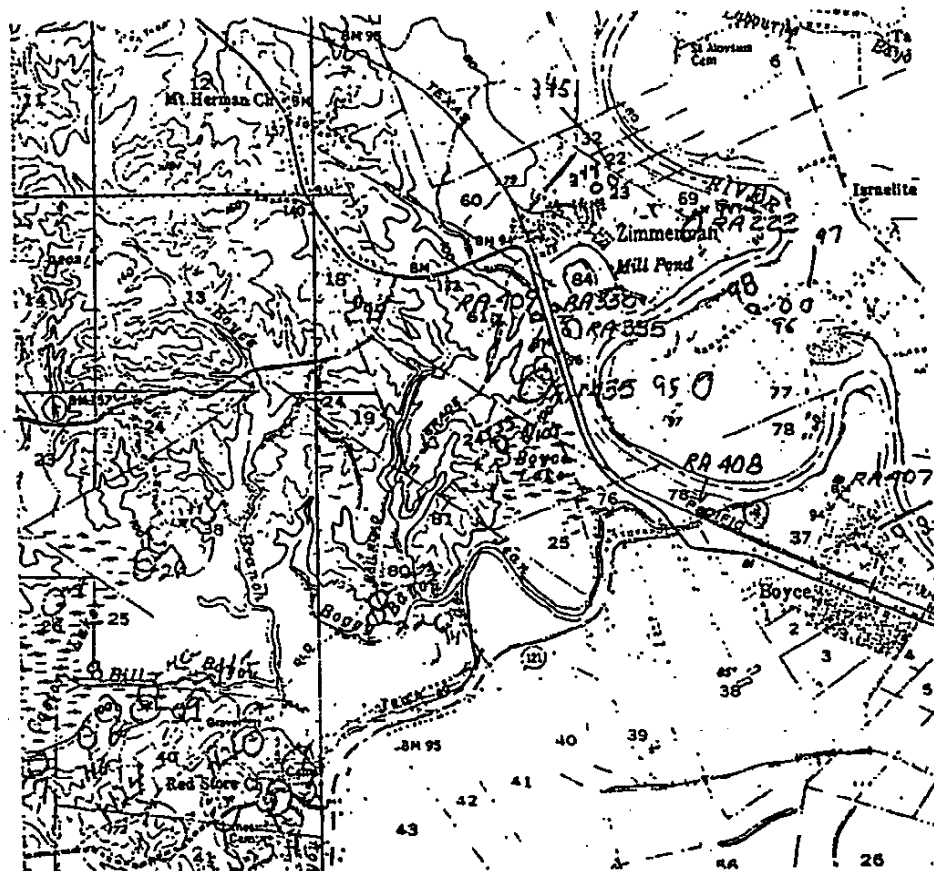
SITE EVALUATION

Site Number: 16RA36

Research Potential:

State/National Register Eligibility: Unknown
Recommendations: None

QUAD MAP OF SITE AREA



RECORDS

Owner and Address:

Tenant and Address:

Informants:

Prev. Invest:

Previous Collections and Availability:

References: Heartfield, Price and Greene, Inc. (1981)

Photos and Maps:

Remarks:

Recorder: John House

Date: 1972

STATE OF LOUISIANA

REFERENCE FORM

Site Name:

Site No: 16RA36

22-687

Heartfield, Price and Greene, Inc.

1981

"Prehistoric Inventory for the Energy
Transportation Systems, Inc. Project."
Prepared for Energy Transportation
Systems, Inc.



MITCHELL J. LANDRIEU
LIEUTENANT GOVERNOR

State of Louisiana
OFFICE OF THE LIEUTENANT GOVERNOR
DEPARTMENT OF CULTURE, RECREATION & TOURISM
OFFICE OF CULTURAL DEVELOPMENT
DIVISION OF ARCHAEOLOGY

ANGÈLE DAVIS
SECRETARY

PAM BREAU
ASSISTANT SECRETARY

January 14, 2005

Mr. Chris M. Chambers
Shaw Environmental, Inc.
4171 Essen Lane
Baton Rouge, LA 70809

Re: Cleco Power LLC
Rodemacher Power Station Unit Number 1
Repowering Project
Boyce, Rapides Parish, Louisiana

Dear Mr. Chambers:

This is in response to your letter dated December 17, 2004, concerning the above-referenced project. As you are aware, Zimmerman Hill (16RA335), is an important archaeological site. Our office believes that further archaeological work will be required within the area of the barge unloading facility. Therefore, we are recommending a Phase I archaeological survey of this area. We realize that the area was previously surveyed in the past, however, archaeological testing has improved since this time.

I have enclosed a copy of our contracting archaeologists list and our Native American Contacts list for your use. If you have any further questions, please do not hesitate to contact Rachel Watson in the Division of Archaeology at (225) 342-8170.

Sincerely,

A handwritten signature in cursive script that reads "Pam Breau".

Pam Breau
State Historic Preservation Officer

PB:RW:s

Encls: as stated



Acadian

Ambulance & Air Med Services



P.O. Box 98000 • LAFAYETTE, LA • 70509-8000

EMPLOYEE
OWNED

AMBULANCE
DISPATCH
511
800-259-1111

ADMINISTRATION
337-291-3333
800-259-3333

BILLING
800-259-2222

June 20, 2005

Ray Sturdivant
Eagle Environmental Services, Inc.
18369 Petroleum Drive
Baton Rouge, LA 70809

Re: Cleco Power LLC
Rodemacher Power Station
AI 2922/GD-079-0390
Eagle Project No 01-00009

To Whom It May Concern:

We are in receipt of your request to respond as required by La. R.S. 30:2157 B acknowledging our ability to respond to a hazardous material incident at your facility located near the town of Lena in Rapides Parish, Louisiana. In response to that request Acadian Ambulance and Air Med Services has the ability to meet the response requirements of Section 473, Chapter 4 of the Life Safety Code of the National Fire Protection Association.

Should you have any questions or need additional information, please contact me at (318) 441-2262.

Sincerely,

Terry J. Arceneaux
Vice President - Operations

Boyce Volunteer Fire Department
P.O. Box 598
Boyce, Louisiana 71409

May 26, 2005

Clew Corporation

To Whom It May Concern:

The Boyce Volunteer Fire Department will respond to Rodemacher Power Station following notification of a fire at the plant. Should the need arise, assistance will be requested ~~from~~ those departments with whom the Boyce Volunteer Fire Department has previously arranged mutual assistance agreements.

~~Chief - Boyce Volunteer Fire Department~~

Wayne Phillips
Wayne Phillips



Rapides Regional Medical Center

Box 3030H
211 Fourth Street
Bossier City, LA 70601-8454
Phone (318) 473-3150/FAX (318) 449-7075
www.rapidesregional.com

July 1, 2005

Ray Sturdivant
Project Manager
EAGLE Environmental Services, Inc
18369 Petroleum Drive
Baton Rouge, LA 70809

Dear Mr. Sturdivant,

This letter is to confirm that in reference to the accordance with R.S. 30:2157, Rapides Regional Medical Center Emergency Department is capable and willing to accept and treat any patients that are contaminated with hazardous materials.

Should you have any further question or require further information , please do not hesitate to contact me at (318)473-3848.

Sincerely,

Shawn LaCombe, RN
Nursing Director
Emergency Department

Boyce Volunteer Fire Department
P.O. Box 598
Boyce, Louisiana 71409

May 26, 2005

Clew Corporation

To Whom It May Concern:

The Boyce Volunteer Fire Department will respond to Rodemacher Power Station following notification of a fire at the plant. Should the need arise, assistance will be requested from those departments with whom the Boyce Volunteer Fire Department has previously arranged mutual assistance agreements.

— Chief — Boyce Volunteer Fire Department

Wayne Phillips
Wayne Phillips

APPENDIX B

CENSUS INFORMATION

Boyce, Louisiana

From Wikipedia, the free encyclopedia.

Boyce is a town located in Rapides Parish, Louisiana. As of the 2000 census, the town had a total population of 1,190.

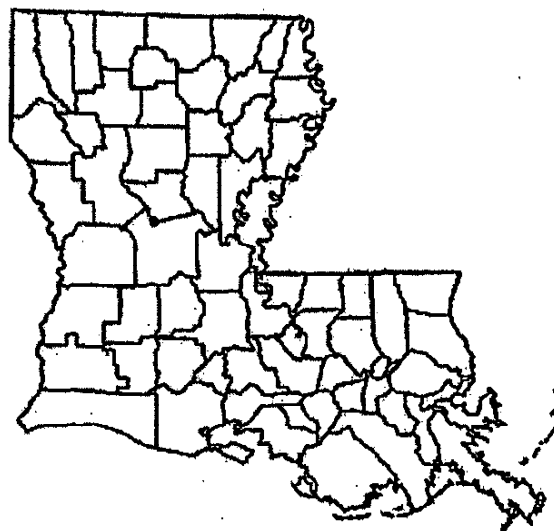
Geography

Boyce is located at 31°23'12" North, 92°40'14" West (31.386778, -92.670577)¹.

According to the United States Census Bureau, the town has a total area of 1.5 km² (0.6 mi²). 1.4 km² (0.5 mi²) of it is land and 0.1 km² (0.1 mi²) of it is water. The total area is 8.62% water.

Demographics

As of the census² of 2000, there are 1,190 people, 426 households, and 310 families residing in the town. The population density is 866.9/km² (2,239.5/mi²). There are 485 housing units at an average density of 353.3/km² (912.7/mi²). The racial makeup of the town is 23.19% White, 74.37% African American, 0.08% Native American, 0.42% Asian, 0.00% Pacific Islander, 0.25% from other races, and 1.68% from two or more races. 0.67% of the population are Hispanic or Latino of any race.



There are 426 households out of which 40.4% have children under the age of 18 living with them, 35.0% are married couples living together, 35.0% have a female householder with no husband present, and 27.2% are non-families. 23.2% of all households are made up of individuals and 11.5% have someone living alone who is 65 years of age or older. The average household size is 2.79 and the average family size is 3.32.

In the town the population is spread out with 34.8% under the age of 18, 11.8% from 18 to 24, 23.3% from 25 to 44, 18.1% from 45 to 64, and 12.1% who are 65 years of age or older. The median age is 29 years. For every 100 females there are 77.1 males. For every 100 females age 18 and over, there are 67.2 males.

The median income for a household in the town is \$17,727, and the median income for a family is \$20,000. Males have a median income of \$24,000 versus \$13,600 for females. The per capita income for the town is \$9,616. 40.7% of the population and 37.9% of families are below the poverty line. Out of the total population, 52.3% of those under the age of 18 and 27.1% of those 65 and older are living below the poverty line.

External links

- Maps and aerial photos (http://kvaleberg.com/extensions/mapsources/index.php?params=31.386778_N_-92.670577_E_type:city_region:US)
 - Street map from MapQuest (<http://mapquest.com/maps/map.adp?latlongtype=decimal&latitude=31.386778&longitude=-92.670577&zoom=6>) or Google Maps (<http://maps.google.com/maps?ll=31.386778,-92.670577&spn=0.11,0.18>)

- Topographic map from TopoZone (<http://topozone.com/map.asp?lat=31.386778&lon=-92.670577&s=200&size=m&layer=DRG100&datum=nad83>)
- Aerial image or topographic map from TerraServer-USA (<http://terraserer-usa.com/image.aspx?s=14&lon=-92.670577&lat=31.386778&w=2>)
- Satellite image from Google Maps (<http://maps.google.com/maps?ll=31.386778,-92.670577&spn=0.11,0.18&t=k>)

Retrieved from "http://en.wikipedia.org/wiki/Boyce%2C_Louisiana"

Categories: Rapides Parish, Louisiana | Towns in Louisiana

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Rapides Parish, Louisiana

From Wikipedia, the free encyclopedia.

Rapides Parish is a parish located in the state of Louisiana. The parish seat is Alexandria and as of 2000, the population is 126,337.

Contents

- 1 History
- 2 Geography
 - 2.1 Adjacent parishes
- 3 Demographics
- 4 Cities and towns
- 5 External link

History

Rapides Parish was formed in 1807 by the government of the Orleans Territory.

Geography

The parish has a total area of 3,527 km² (1,362 mi²). 3,425 km² (1,323 mi²) of it is land and 102 km² (39 mi²) of it is water. The total area is 2.89% water.

Adjacent parishes

- Grant Parish (north)
- La Salle Parish (northeast)
- Avoyelles Parish (east)
- Evangeline Parish (southeast)
- Allen Parish (southwest)
- Vernon Parish (west)
- Natchitoches Parish (northwest)

Demographics

As of the census² of 2000, there are 126,337 people, 47,120 households, and 33,125 families residing in the parish. The population density is 37/km² (96/mi²). There are 52,038 housing units at an average density of 15/km² (39/mi²). The racial makeup of the parish is 66.51% White, 30.43% Black or African American, 0.74% Native American, 0.86% Asian, 0.04% Pacific Islander, 0.42% from other races, and 1.01% from two or more races. 1.38% of the population are Hispanic or Latino of any race.

There are 47,120 households out of which 34.60% have children under the age of 18 living with them, 49.70% are married couples living together, 16.80% have a female householder with no husband present, and 29.70% are non-families. 26.00% of all households are made up of individuals and 10.30% have someone living alone who is 65 years of age or older. The average household size is 2.56 and the average family size is 3.09.

In the parish the population is spread out with 27.20% under the age of 18, 9.50% from 18 to 24, 27.90% from 25



to 44, 22.40% from 45 to 64, and 13.10% who are 65 years of age or older. The median age is 36 years. For every 100 females there are 91.70 males. For every 100 females age 18 and over, there are 88.00 males.

The median income for a household in the parish is \$29,856, and the median income for a family is \$36,671. Males have a median income of \$29,775 versus \$20,483 for females. The per capita income for the parish is \$16,088. 20.50% of the population and 16.40% of families are below the poverty line. Out of the total population, 26.30% of those under the age of 18 and 16.30% of those 65 and older are living below the poverty line.


Cities and towns

- Alexandria ■ Cheneyville ■ Glenmora ■ Pineville
- Ball ■ Deville ■ Lecompte ■ Woodworth
- Boyce ■ Forest Hill ■ McNary

External link

- Rapides Parish government's website (<http://www.rppj.com/>)

State of Louisiana



Regions

Acadiana - Florida Parishes - Greater New Orleans - Northwest Louisiana

Largest Cities

Alexandria - Baton Rouge - Bossier City - Houma - Kenner - Lafayette - Lake Charles - Metairie - Monroe - New Iberia - New Orleans - Shreveport

Parishes

Acadia - Allen - Ascension - Assumption - Avoyelles - Beauregard - Bienville - Bossier - Caddo - Calcasieu - Caldwell - Cameron - Catahoula - Claiborne - Concordia - De Soto - East Baton Rouge - East Carroll - East Feliciana - Evangeline - Franklin - Grant - Iberia - Iberville - Jackson - Jefferson - Jefferson Davis - La Salle - Lafayette - Lafourche - Lincoln - Livingston - Madison - Morehouse - Natchitoches - Orleans - Ouachita - Plaquemines - Pointe Coupee - Rapides - Red River - Richland - Sabine - St. Bernard - St. Charles - St. Helena - St. James - St. John the Baptist - St. Landry - St. Martin - St. Mary - St. Tammany - Tangipahoa - Tensas - Terrebonne - Union - Vermilion - Vernon - Washington - Webster - West Baton Rouge - West Carroll - West Feliciana - Winn

Retrieved from "http://en.wikipedia.org/wiki/Rapides_Parish%2C_Louisiana"

Categories: Louisiana parishes | Rapides Parish, Louisiana

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Geographic Area	Annual Estimates for the Population for Counties of Louisiana April 1, 2000 to July 1, 2003				April 1, 2000	
	July 1, 2003	July 1, 2002	July 1, 2001	July 1, 2000	Estimates base	Census
Louisiana	4,496,334	4,476,192	4,466,001	4,469,216	4,468,958	4,468,976
Acadia Parish	59,246	59,059	58,821	58,827	58,864	58,861
Allen Parish	25,268	25,108	25,320	25,416	25,440	25,440
Ascension Parish	84,424	81,714	79,522	77,357	76,627	76,627
Assumption Parish	23,269	23,192	23,234	23,386	23,388	23,388
Avoyelles Parish	41,791	41,524	41,473	41,487	41,481	41,481
Beauregard Parish	33,514	33,167	33,142	33,073	32,986	32,986
Blenville Parish	15,320	15,403	15,492	15,719	15,752	15,752
Bossier Parish	101,999	100,732	99,612	98,615	98,382	98,310
Caddo Parish	250,342	250,250	251,162	251,932	252,089	252,161
Caldcasieu Parish	183,889	183,165	183,023	183,520	183,577	183,577
Caldwell Parish	10,599	10,599	10,546	10,568	10,560	10,560
Cameron Parish	9,708	9,742	9,851	9,953	9,991	9,991
Catahoula Parish	10,615	10,743	10,857	10,911	10,920	10,920
Clabome Parish	16,534	16,623	16,847	16,774	16,851	16,851
Concordia Parish	19,730	19,913	20,078	20,221	20,247	20,247
De Soto Parish	25,990	25,766	25,535	25,521	25,494	25,494
East Baton Rouge Parish	412,447	411,028	411,067	412,766	412,852	412,852
East Carroll Parish	8,997	8,084	9,214	9,397	9,421	9,421
East Feliciana Parish	21,095	21,091	21,233	21,375	21,360	21,360
Evangeline Parish	35,149	35,329	35,353	35,405	35,434	35,434
Franklin Parish	20,860	20,881	21,048	21,264	21,263	21,263
Grant Parish	18,887	18,737	18,724	18,710	18,698	18,698
Iberia Parish	74,146	73,708	73,451	73,264	73,266	73,266
Iberville Parish	32,811	33,119	33,271	33,306	33,320	33,320
Jackson Parish	15,259	15,267	15,381	15,388	15,397	15,397
Jefferson Parish	452,459	451,708	452,144	454,697	455,466	455,466
Jefferson Davis Parish	31,113	31,108	31,202	31,407	31,435	31,435
Lafayette Parish	194,239	192,856	191,113	190,577	190,503	190,503
Lafourche Parish	91,281	90,729	90,126	89,955	89,974	89,974
La Salle Parish	14,179	14,219	14,156	14,284	14,282	14,282
Lincoln Parish	42,413	42,176	42,192	42,498	42,509	42,509
Livingston Parish	102,046	98,909	95,531	92,571	91,814	91,814
Madison Parish	13,079	13,194	13,432	13,714	13,728	13,728
Morehouse Parish	30,671	30,517	30,670	30,980	31,021	31,021
Natchitoches Parish	39,002	38,926	38,763	39,083	39,080	39,080